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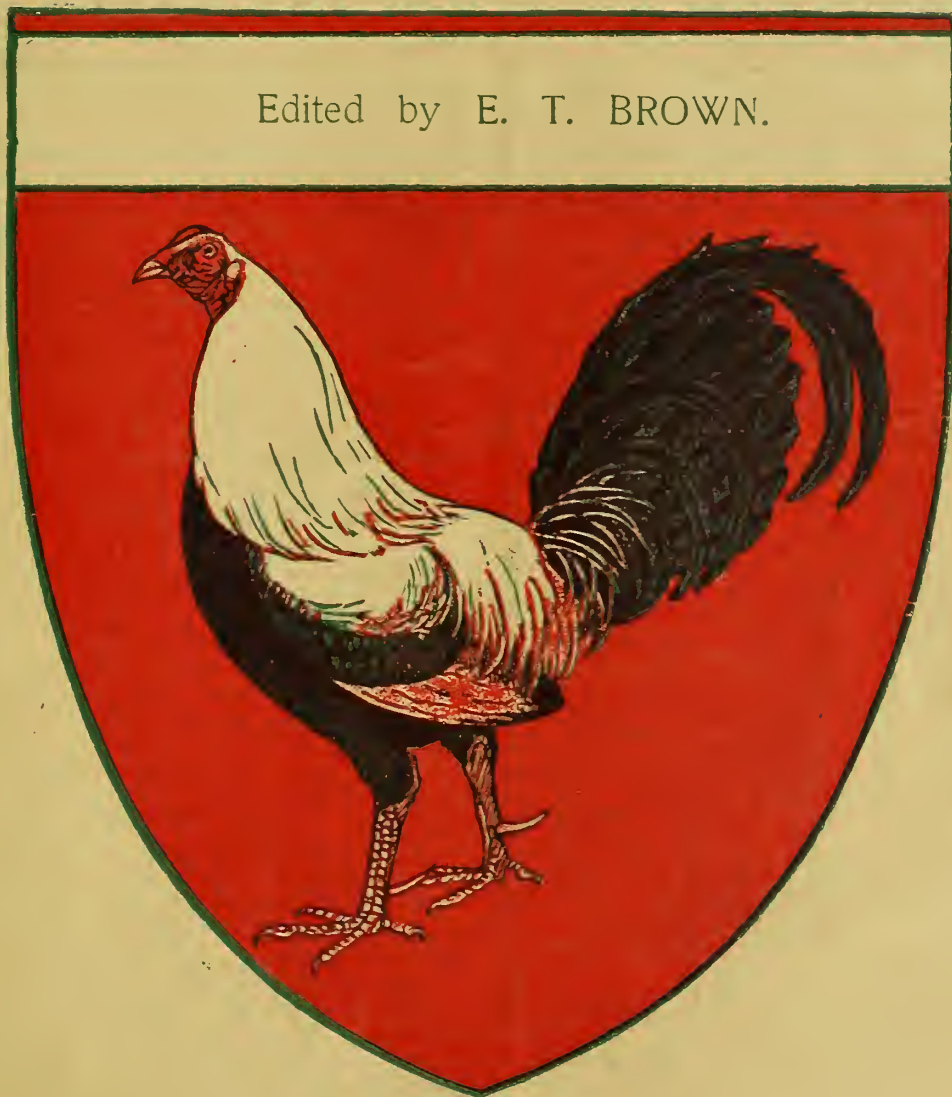
THE ILLUSTRATED POULTRY RECORD

NUMBER 10.

JULY, 1914.

VOLUME VI

Edited by E. T. BROWN.



MONTHLY

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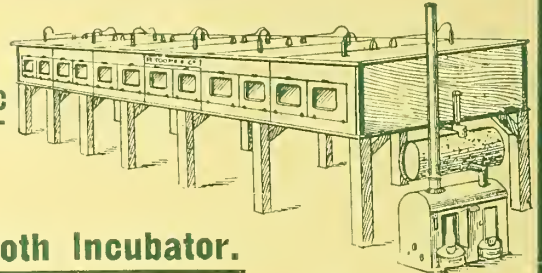
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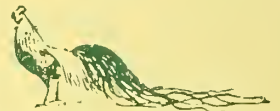
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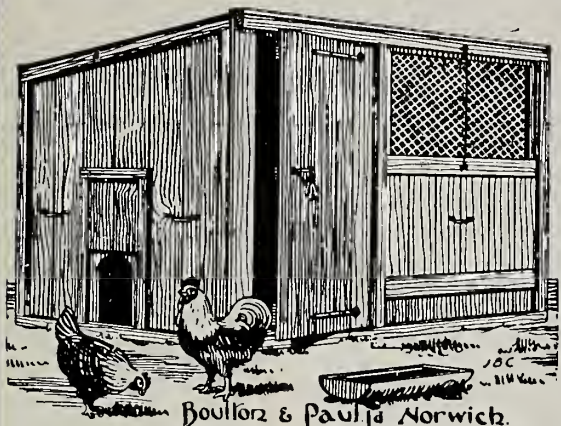
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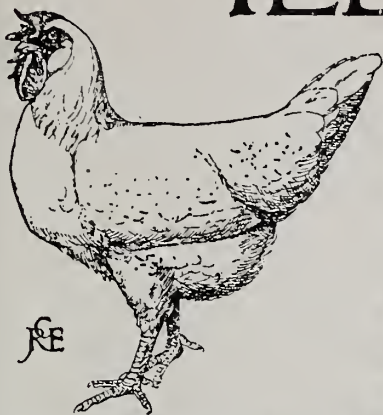
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"POSSESSION'S NINE POINTS OF THE LAW,"

THE ILLUSTRATED POULTRY RECORD



Vol. VI.—No. 10.

July 1, 1914.

Monthly, Price Sixpence.

DIARY OF THE MONTH.

EDITORIAL NOTICES.

TUDOR HOUSE, TUDOR STREET, WHITEFRIARS,
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The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs or sketches, and publication in the ILLUSTRATED POULTRY RECORD can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.

The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.

The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor.

The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser, he is requested to communicate at once with the Editor.

World's Poultry Congress.

We learn that the first steps are being taken for laying the foundations of what can hardly fail to be the most important gathering in connection with the poultry industry. The two years which will elapse before this assemblage at The Hague will all be required to organise it. A strong executive committee has been formed, the first meeting of which will take place in a few days, after which doubtless other announcements will be made and action taken to secure the adherence of all countries. Several members of this committee have been nominated by the Netherlands Minister of Agriculture, who is taking a keen personal interest in the Congress. The elected representatives of the International Association of Poultry Instructors and Investigators are: Mr. Edward Brown, F.L.S. (President), Professor Beeck (Germany), Professor Loisel (France), and Mr. W. A. Kock (Denmark). Mr. H. A. Beaufort, of Amersfoort, Holland, has undertaken the secretarial duties.

"Cinderella" Again.

The report which we give in the present issue by Messrs. R. Bourlay and Arthur Little, poultry instructors in the Transvaal and Cape Colony respectively, shows that in South Africa are reproduced conditions with which we are familiar at home—namely, lack of instructors and the tools with which they perform their duties. The opportunities are there in abundance, equally as to area of land and demand for produce. South Africa might be one of the great poultry countries of the world. In Mr. Bourlay's report it will be seen that there are only four poultry teachers for the

entire Union, nearly half the size of Europe. What wonder progress is slow! It is the same story as in Britain. If we take our largest county, with its population of nearly three and a half millions—more than double the white inhabitants of South Africa—only one poultry instructor is provided. So the tale goes on. There is sometimes a grim, if sorrowful, satisfaction in knowing that other people are as badly off as we are ourselves, even though the condition of affairs is no credit to any of those responsible.

A Page in the "Times."

A feature of our great daily contemporary which emanates from Printing House Square, in its later developments, is the series of supplements and special numbers issued from time to time. Of these, most notable is the "Special Food Number," issued on June 8, consisting of forty-four pages, thus bringing the paper on the date named up to sixty-eight pages, all for one penny; indeed a remarkable feat in journalism. With the great variety of its contents, the wide range of subjects dealt with, and the wonderful array of facts thus brought together we cannot deal, other than are concerned with our special branch of food supply. What cannot fail to be satisfactory to poultrymen is the prominence given to eggs and poultry, to which an entire page is devoted. That in itself is a sign of recognition which cannot fail to exert a wide influence. Extracts are given in the present issue from some of the articles. What is specially emphasised, as we have so often preached, is the necessity for enhanced production, and that efforts should be put forth for development of our national resources in this direction. As stated in the *Times*, it is evident that the United Kingdom could produce all the eggs and poultry required without difficulty, "and that if the present poultry population were doubled, which in Britain could be accomplished in two years, there would be an abundant supply, and fourteen and a half million pounds sterling added to the production of the country annually." We warmly commend study of this number to those holding positions of authority and influence.

Production the Main Factor.

One of the points strongly emphasised by the *Times* in its Food number, already referred to, is that an increased production of eggs and poultry is the main factor. That this states what are the facts of the case is evident. As an exemplification, attention may be called to the monthly report as to imports to the end of May given in the present issue. Here we find that, in spite of a continued increase in the volume of supplies, though not nearly to the extent recorded a year ago, the declared average prices are higher than ever, having reached the maximum of any correspond-

ing period. The same is equally true of home supplies, which all over the country have been extremely dear for the season of the year. The reason is demand advances much more rapidly than supplies, whether native or foreign. The *Times* puts the matter in a nutshell when it states that there is in the United Kingdom only half a hen per head of the population!

Table Poultry Rearing.

The brief account which we publish this month of a visit paid by the Editor to Guilden Morden, where Mr. F. G. Paynter is conducting his second trial, will be read with interest. From this and what has been published previously, it is evident that the very essence of the method is linking poultry-raising and cultivation, without which there can be no permanent success so far as the poultry side is concerned. Mr. Paynter's idea is that there should be four small-holders side by side with sixteen or seventeen acres of land, each carrying out a part of the work—namely, cultivation, keeping the breeding stock, raising the chickens, fattening, &c. The testing point would be whether four men could be found with the necessary skill and willing cordially to work together continuously and successfully. That is not so easy as it appears. As sixteen acres, plus rearing, say, 4,000 chickens, would be too much for one man, we suggest that if he had eight acres, rearing half the number of birds stated, or even one thousand, adopting the regular rotation, he should, with family help, be able to cultivate profitably the six acres. It is worth an experiment, if the man can be found, but would require four years for its test. Cannot one of our Agricultural Colleges or Farm Institutes make an experiment of this nature? In districts not suited to table-chicken raising, egg-production might be tried. Three to four hundred laying hens might be kept in this way. Reverting to Mr. Paynter's work, we were surprised to learn that his is the financial responsibility, as the Board of Agriculture does, no more than provide the land and make a small grant in aid.

Storrs Agricultural College.

This institution, in the State of Connecticut, has for many years given considerable attention to poultry. At one time Professor C. K. Graham, now of Hampton, Va., was in charge, and later Professor Stoneman. It is the site of one of the American laying competitions. Announcement is made that Mr. Tom Barron has been invited to deliver a course of lectures on poultry, such invitation following upon his remarkable successes in the Transatlantic competitions, wherein he has outdistanced all his rivals, and proved once more that the Old Country has not lost its skill and cunning. We are sure Mr. Barron will have much

to tell that cannot fail to be of interest. On his return it may be hoped that one of our British institutions will engage him to repeat the course over here, when he would be assured of a good array of hearers. The question may be asked whether any one of these bodies has public spirit enough to carry through such a scheme.

Broodiness in Hens.

Why some birds are non-sitters and others from time to time become broody has hitherto remained one of those things "no fella can understand." In our last issue Mr. Oscar Smart, in his article on acquired characters, made a suggestion that deserves consideration. We repeat what he said :

The comb regulates the bird's temperature. As the bodily heat rises (when the birds are in full breeding condition), the constant, although almost imperceptible, growth of the comb keeps the temperature at about normal. In a naturally small-combed breed (such as the Orpington), where the comb is more or less deficient in its proper function, the temperature at last rises to a point that decidedly indicates fever. The egg supply is then checked, and the bird becomes what is generally termed "broody."

This is the first attempt we have seen to account for what is a natural process, upon which further information and evidence are desired. Hitherto, the question has been looked at from the opposite direction. That there is a correlation between the comb and the ovaries is generally accepted, but that the former had an influence upon broodiness does not seem to have been thought of. We await further information.

New Zealand Poultry Conference.

The reports of the fourth annual conference, held at Wellington, N.Z., April 14 to 16 last, show that good work is being done in promotion of practical poultry. In so far as attendance of delegates, interest manifested on the part of Government and municipal authorities, and the Press, these appear to have marked it as the best of the series. The papers and discussions appear to have been mainly on practical questions. The opening opportunities for export of eggs to British Columbia have given considerable impetus to this business, in which are great possibilities. We note that one of the speakers urged that, as in the case of butter and meat, there should be a control test by an expert appointed by Government in order to ensure quality of eggs shipped. Another proposal made was to the effect that a New Zealand Utility Poultry Standard shall be drafted, as distinct from that in use for exhibition purposes. Evidently the conference was instructive and should prove valuable.

Vitality in Chickens.

During a recent visit to see the electrified chickens which are being reared by Mr. Randolph

Meech, in accordance with the system devised by Mr. T. Thorne Baker, about which more will be said in our next issue, several questions suggested themselves for consideration and investigation. One only we propose to mention at the present time—namely, an inquiry as to the effect of food upon what is usually called vitality, our rendering of which is that all the forces and activities of the body are in equal and full operation conformable with the age of the bird. Probably there is no branch of poultry management which is less understood than feeding. With all the progress made we are a long way from having arrived at satisfactory conclusions. That food is essential to the expression of vitality is unquestionable; that, if it be inadequate or unsuitable, it may lower vitality may be accepted; but that it is creative of vitality is doubtful in the extreme. On the other hand, it is evident that vitality, whether inherited or conditional, is necessary to effective digestion of food, without which growth in chickens must be retarded and wastage ensue. One of the problems which presents itself for solution is, how best functional activity can be encouraged so that the food eaten shall be utilised to the final point. Here are questions deserving the fullest investigation, for upon them success largely depends. If an applied electrical current will help in the direction of increasing the ability to digest food it will be a great factor in days to come.

Selling Eggs.

Upon a recent Sunday we were passing along a street of good shops in London, among which was a high-class dairy on the sunny side of the street. It was a sunny June day. There were no blinds or shutters to the windows, behind which were several large bowls of fine-looking eggs, guaranteed new laid, at eighteen pence per dozen. Yet there they were exposed to the full glare and heat of the sun all day. As the shop was closed, if a thermometer had been visible, it is probable that the temperature would have registered during part of the day well over ninety degrees Fahrenheit, the effect of which between Saturday night and Monday morning must have been to reduce the quality to a very marked extent, causing a large amount of evaporation and, perhaps, if fertile, causing the germ to develop.

This is but one of many examples that could be quoted of absolute want of recognition on the part of those who ought to know that an egg is perishable. A draper would never think of leaving goods with fading colours exposed in a like manner; a fruiterer takes care that soft fruits shall be kept within a cool place; a butcher has his refrigerator for meat; and so on; but eggs, being encased by a shell, are thought by many to need no such precautions. It is a case of "what the eye does not see the heart does not grieve for." Could folly go further?

Another direction in which there is a vast amount of loss is owing to the use of dirty fittings in boxes. Upon that we do not propose to dwell. It is so apparent. For the sake of a few pence to replace cardboard sections, these are used in a filthy condition, with the result that the eggs are tainted. That may explain why native eggs are often inferior to foreign, by reason of the fact that new cases and new packing material are used for the latter.

Joint Stock Poultry Farming.

There are two ways in which companies are formed—one, to take over existing businesses, perhaps with extensions, and the other is to start from the basis. As a rule, the former has the better chance of success, although a large amount of dead stock is thus unloaded on the investing public. We have known both phases applied to poultry on this side, but nothing approaching that of the United Poultry Farms now being formed by a combination of five well-known poultry-breeding establishments in the United States. The capital is to be a million dollars (£200,000). It is a bold suggestion. Whether those who have money to invest will respond remains to be seen. To pay a dividend of 10 per cent. there must be net profits made yearly of twenty thousand pounds. What the result must be is evident. The more we can keep the poultry industry clear of wild-cat schemes of this nature the better will it be. To company promoters and exploiters generally we say, "Hands off!" Ours is a pursuit which must be individualistic. Its success depends entirely upon the personal equation, which can never be bought. Moreover, what we aim for is that ten thousand smaller breeders and producers shall be benefited, not that a few shall reap all the rewards.

Congratulations.

In a few days our contemporary the *Feathered World* will celebrate the twenty-fifth anniversary of its establishment. We desire to offer our hearty and sincere congratulations and good wishes and hope that many of us may be here to mark its jubilee. The story of its foundation and success is that of grit and determination, battling against great odds seemingly at times too great to be overcome. Mrs. Comyns-Lewer won the admiration of all for her pluck. Within recent years, actively aided by Mr. S. H. Lewer, the position won has been well and firmly held. As a Fancy journal the *Feathered World* is known all over the globe, and the fact that it is also devoting attention to utility topics shows that it is awake to changes that are taking place.

Seaside Trade.

Local demand, so long as it is a profitable one, should always be met first. Mr. A. T. Johnson, therefore, is well justified in calling attention to the way in which local producers in many districts totally neglect what is a highly lucrative trade during several months of the year, when many of the local shopkeepers have to depend almost entirely upon imported produce. In some districts, however, much more progress has been made than evidently has come within Mr. Johnson's experience in North Wales, where production is very backward indeed, and where it might be developed enormously. We are glad to note, as already stated, that there is a movement going on there. Catering for seaside and holiday resorts should be kept in view by country people in the hinterland, and with the effort to extend the period instead of concentrating in August this should become of greater importance.



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GENERAL VIEW OF THE REARING PENS AT GULDEN MORDEN, WHERE MR. PAYNTER IS CARRYING ON HIS SECOND EXPERIMENT. (See page 461.)

POULTRY-KEEPING AND THE HOLIDAY SEASON.

By A. T. JOHNSON.



HERE is a phase of poultry-keeping which offers great opportunities to the producer of both table fowls and eggs, and one which has so far been almost entirely neglected. I refer to the supplying of the above articles to the innumerable seaside and other summer resorts, which, from now until the end of September, will be drawing so vast a proportion of the people from the towns and great centres of industry.

Go where you will among any, or at any rate ninety per cent., of these resorts, and you will there find that local supplies of poultry produce are totally inadequate to meet the demand. During the off season, it may be, the retailers and the door-to-door hawkers are able to meet the requirements of the resident population, but when that population is increased from, say, a normal 3,000 to 15,000 or 20,000, the poulterers are often at their wits' end to know where to get sufficient produce. They will tell you that to depend on "local stuff" is a hopeless business. Hence they must send away—perhaps hundreds of miles—to the big markets, where they can be tolerably sure of having their orders fulfilled. It pays them better to do that, to expend large sums on carriage, to worry with "empties," and to give more for the "stuff" itself than to place any reliance in the local man whose supplies are irregular, frequently inferior, and which too often bear the stamp of being handled by incompetent novices.

From the visitors'—the consumers'—point of view the position is equally disappointing and anomalous. They come down to the country with the expectation of enjoying country fare. They find instead that the eggs on their breakfast table bear the old familiar stamp, if not the flavour, they bore at home. And insult is added to injury when they find that these eggs cost them more than they did in the towns; the chickens and the ducklings also cost them more and they too do not taste of the country. It is not this cost that the average holiday-maker minds so much. If he were to get the article he expected to get, the article for which, as a part of the joys of his holiday, he has saved up for twelve months, he would cheerfully pay for it. A change of food to him is as beneficial as a change of air, and he feels entitled to it. But he finds, in so far as poultry produce is concerned, that the country offers him no choice. He must either devour the same food (at an inflated price) which his family grocer or poulterer supplies at home, the food which has followed him to the seaside as a commissariat waggon follows an army, or go without. And he resents it. He thinks it is ridiculous, and has every right to think so.

It is plain that there is "something rotten" in the state of affairs that this kind of thing should be, and if you cast around for a remedy half-a-dozen will be immediately forthcoming. One will tell you that what is wanted is co-operation among local producers. That, undoubtedly, is a factor upon which very much depends, but it is not everything by a long way. Co-operation will not make hens lay between July and September; it will not make the farmer or cottager produce chickens for August consumption if it has never been his custom to do so. Co-operation will not remove that apathetic, come-day-go-day spirit which drugs so many of our rural countrymen like an opiate; it will not shatter that stubborn independence, that desire to be left alone, and that suspicion of his fellow-man with which the average Britisher views an invitation to club together for the common good. If the Briton were only a Dane, if he were—well, he is what God and his fathers have made him, and I begin to feel that to expect him to adopt a peculiarity of character which is not his own is to expect too much. It is not in us to do as the Dane does. Our calibre is of a different metal.

But let that be. Much can be achieved without the genius for co-operation. There will be time enough to talk about that when we have got the produce. At the present moment the greatest trouble of all is the shortage of local supplies—especially eggs. In my district, say a radius of fifteen miles from Llandudno and Colwyn Bay—and it is not an exceptional one in any way—eggs were a penny each by the first week in May. Whitsuntide sent them up to three-halfpence and twopence. They are standing at that at the time of writing, but before July is half spent they will be half-a-crown a dozen, and during August—well, they will then command any price you have the conscience to ask for them. I speak, of course, of genuine fresh local eggs.

These high prices are obviously the result of both non-production and extraordinary demand. They are prices which to the producer (who lives, bear in mind, close by his market) would be immensely profitable—much more profitable, in fact, than the winter egg which we hear so much about. Yet eggs are not forthcoming. It may be that the farmers and cottagers produce more than they did twenty years ago—in fact, I know they do—but, then, not only has the resident population increased enormously in that period, but the visitor list has more than doubled.

Now, without any question of co-operation as an essential, though I do not for a moment doubt its usefulness, there is no reason why thousands of

pounds annually should not go into the pockets of those local poultry-keepers who live in a district adjacent to holiday centres. But they will have first to alter their methods (if they have any) or adopt measures to secure that income. Take the summer egg. The reason why it is practically non-existent on so many holdings at this season is well known. The older hens are moulting, or in a state of quiescence following the spring laying; the younger ones, the pullets, have been hatched too late to lay before November—or perhaps next February! To remedy these matters, to bring the old and more mature youngsters into profit now, is a matter of feeding and management which presents no great difficulty. Briefly, a change of run—say, to the after-grass just cleared of hay—will work wonders with the farmer's old birds. The introduction of lean meat, which has not been fed since spring, perhaps not at all, will also have a very marked effect. If the hens are heavy and sluggish, as they are apt to be, especially those in more or less confined runs, a sprinkling of sulphur over the soft food twice a week will be highly beneficial at this season. Fresh, juicy, green stuff should also be fed and the grain feed confined to good white oats scattered as wide as circumstances will allow. With these little attentions, a hen is scarcely worth keeping if she will not respond by laying at this time of year. As to the pullets, it is a matter of getting them hatched early enough. A first cross, like a Houdan-Minorca or Houdan-Leghorn, if brought out in March, or even in April, will lay by August without any special attention, and she will continue laying right on into autumn.

In opposition to this promotion of summer laying the old argument will often be trotted out—viz., that you are, by running the hens at a profit now, depriving them of the possibility of laying in winter. But I contend that, in the circumstances, it is infinitely wiser to get every egg you can during the holiday rush and let the winter supply go where naughty niggers go. The winter egg is too often made a golden calf. There is practically no profit in it as compared with the summer egg at the same price, or even a little less. Therefore, I say, force your hens, young and old, to lay now and let them go into hibernation when the lodging-house windows are shuttered up, the great hotels silent and deserted, and the seaside resort generally a place to be avoided.

As for the supply of fowls and ducks, the matter is a still easier one for the producer. The latter, when his best market is in late summer, is not up against the expense and difficulty of hatching spring chickens, though it will often pay him to regard Easter and Whitsuntide as seasons of possibilities. Indeed, to get the bulk of one's chickens and ducklings ready for August Bank Holiday should precisely suit the temperament of the average British cottager and farmer in the capacity of poultry-keeper. Late hatching is his

peculiar strength. He can wait complacently until the hens get broody, until the weather is nice and warm for the chickens, until the latter can practically fend for themselves, until he has got all his other crops in before he turns to this department. Yet, oddly enough, with all these advantages, with every possible encouragement, he does not seem to grasp the situation. The seasons come and go; he is tried and found wanting. Business men who have their livings to make cannot put up with his dilatoriness. They tell him so, and send elsewhere—to the large towns—for their “stuff,” and a



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A CELEBRATED CANADIAN PLYMOUTH ROCK.

good deal of it is foreign. And still he goes on, or, rather, stays where he is. Decades pass by and find the local producer, the man on the spot with every possible opportunity, with the easiest of openings for making money positively thrown at him, still with the same old laggard spirit clogging the way.

The daily doing of needful things with regularity and efficiency is half of a liberal education.

BIOSCOPICAL VIEWS OF POULTRYDOM.

By ENOS MALPAS.

II.—A BANTAM'S HALL-MARK.

IN the month of November of one of the closing years of the nineteenth century a notice appeared in the poultry journals and several other newspapers, of which a copy is given in the first parallel column below. Eleven months later the news paragraphs of the Broxford county papers contained an item which awakened considerable attention, as reproduced in the second column. Only a very few people, certainly not more than four or five, had inside knowledge which connected the two.

£20 REWARD.

Lost or Stolen from the Broxford Poultry Show on October 4th, 189—, a Black-Red Game Bantam Cock, winner of First Prize and Cup in Class No. 83.

The above reward will be paid to anyone giving information leading to the recovery of the bird, or, if stolen, to the detection of the thief or thieves.

By Order of

The Committee,

Broxford Poultry Show.

A MYSTERIOUS GIFT.

The Committee of the Broxford County Hospital have received a donation of £50 under somewhat strange circumstances, which do not, however, detract from its useful nature.

On Tuesday last a small parcel was found in the letter-box at the Hospital gate, which, when opened, was found to contain fifty sovereigns.

No name was enclosed, but merely a request for acknowledgment of receipt through the Press.

About the time named many of the leading shows were being victimised by thefts, although the loss fell upon the exhibitors, for the terms of their regulations protected committees against liability in such cases. Several shows, however, recognising that there was a moral, if not legal, responsibility, made in their own interests some compensation to the owners. Payments of that kind were not the full extent of the loss. Show authorities were compelled to engage police constables and additional attendants; to fasten up the pens, and adopt other precautions calculated to make more difficult the operations of thieves. Even then there was no security. There might be a check for a time. The moment there was any relaxation of vigilance the tale of losses was repeated. It was a time of great anxiety to committees, to attendants, and to exhibitors, the latter of whom were afraid to send their best birds even when accompanied. The police were completely baffled, as much mystified as over Jack the Ripper. In no single instance had a culprit been brought to justice. The birds disappeared, and that was all which could be said.

Many of the stolen exhibits were pigeons, but poultry, even of the larger breeds, vanished. Without exception these were good specimens, not so much for their exhibition value, though

that might be considerable, but as breeding stock. It was apparent that those who "removed" them knew their value. Needless to say, no one ever made its appearance in any of the larger English shows. Some were believed to have been exported, though actual evidence was difficult to obtain. In one season the actual loss must have reached some hundreds of pounds sterling.

So far as the Black-Red Game Bantam cock referred to above was concerned, the theft was the most daring of all. He was the one of highest value stolen up to that time which had disappeared in this manner. The owner was Mr. John Alton, a Northern breeder, who had spent many years and a considerable amount of money in perfecting his strain. As a rule he only exhibited two or three times each season, though he attended many of the leading events, at some of which he acted as judge. No one had studied his stock more closely. It was frequently said that he could trace the pedigree of every bird for many generations, and when he occasionally sold one he watched with equal care its history and influence. To him the main interest was the breeding, in which direction he made many experiments to test his theories. I well remember visiting his place not long before the theft took place, and remarking that the birds found there—less than a hundred in number—were the most perfect collection I had ever seen. To my practised eye there was not one bird which was unworthy of competing in the highest grade classes that could be produced in the country.

What he had set himself to attain was style, in which respect he had succeeded beyond even his own hopes. In reach, in carriage, and yet in absolute balance between head, neck, body, and legs, it seemed as if skill could no farther go. Combined with these was brilliancy of plumage and clearness of definition. The birds were pictures, a delight to look upon, and, as they were trained to a nicety, they always did themselves justice. Mr. Alton could have swept the decks at every show in the country, had he so wished, but that was not his way. He preferred to keep the birds mainly for his own delectation, and to give everyone else an opportunity.

It is not too much to say that the two-year-old cock sent to Broxford Show was the champion of all. That was the first time it had been exhibited. In the pink of condition, apparently knowing something of its own merits, it displayed its qualities to the full, for Mr. Alton and his man, who shall be nameless, knew how to train a bird

without in the least breaking its spirit, which is not always the case. Its brilliancy of eye and of action won admiration from every rival exhibitor. No one questioned its right to every honour it could possibly gain at that show and wherever it might be exhibited. It was the cynosure of all eyes. Many offers were made for it at prices which were then regarded as fabulous; but it was not for sale, and the catalogue price was prohibitive. Around the pen breeders of all varieties crowded during each day. At night, for safety, special detectives were engaged for protection of so valuable a piece of fowl flesh and feather.

The show was almost at its close on the second day, when it disappeared. How it came about no one ever knew, but the avenue was evidently vacant for not more than five minutes, during which time it was abstracted. The bird was certainly there at the beginning of that time, for a well-known breeder was making a last bid to the owner, and both were examining it. They walked along the avenue together to inspect another exhibit, and then returned—to find the pen empty. It had apparently vanished into the already darkening air. At that moment Mr. Alton's man came up.

"Where's Cæsar?" asked Mr. Alton, for that was the bird's cognomen.

"What?" was the startled response.

"Why have you taken him out?" was asked.

"I've not touched him," said the man, who was as proud as he was fond of the Bantam.

"Who has then?" asked the alarmed owner.

"I don't know," was the reply, explaining that, as Mr. Alton was in front of the pen and engaged in conversation, he had gone with a friend to get a cup of tea.

Immediately there was a hue and cry. Members of the committee were sent for, attendants summoned, and the exits were at once closed. Every hamper in the place was examined. No one was allowed to leave the hall until the police had looked them over. All, however, in vain. Not the slightest trace could be found of the lost bird, which might have been a spirit so far as leaving any trace behind. No one had been noticed near, and the full force of detectives, professional and amateur, could not even make a guess or fix the least suspicion on anyone. So startled were those present in the showroom that men of all grades willingly and freely submitted to the indignity of a personal search, in the hope that in this way the lost exhibit might be discovered.

The event was a nine days' wonder. Mr. Alton bore his loss in a truly fancier spirit, not only refusing to blame his man or the committee, or hold them responsible for his loss, but added £10 to the like amount they offered as a reward, making the sum stated in the advertisement. All he would say was that sooner or later the truth would come out, and that he intended to wait his time. There was a general feeling of sympathy

with him among all classes of exhibitors, with an equal sense of dismay, so much so that many shows suffered in entries that year—at least, so far as the best specimens were concerned. Hundreds of eyes scanned closely for the rest of the season every class of Black-Red Game Bantams all over the country, not to gain the reward, but in admiration of the despoiled owner, whose man was almost heartbroken, blaming himself, even though his master never thought of doing so.

All was useless, however. Cæsar was not. Nothing more could be said.

* * * * *

The following September, eleven months afterward, there was a strong Bantam section at Northcliffe, in another county, and the Black-Red Cockerel class was well filled with an array of fine specimens, in which the competition was very keen. Mr. Alton had never exhibited there, as he did not believe in these early chicken shows, or even attended it, for he was a busy professional man. He could not explain why, but somehow or other felt a special desire to visit the exhibition. Perhaps it was a premonition of what might be and what took place. Finding an engagement in a neighbouring town fit, he went to Northcliffe on the opening day. Naturally his favourites, the Game Bantams—for he bred nothing else—commanded his first attention. Often he said that a show at which he did not exhibit or judge gave him the greatest amount of pleasure, provided the classes were good, for he could regard the birds with a sense of detachment not otherwise possible.

I had judged part of the show, and my duties were over. Meeting him near the secretary's office as he was buying a catalogue, I said:

"Good-day, Alton. I am glad to see you here, but hardly expected you, yet was hoping you might perchance turn up."

"Why do you say that, Malpas?" he asked.

"For the simple reason that it looks as if at last you are going to have a serious competitor," I answered.

"That's good news!" he said, heartily, for he was a true sportsman. "I've been hoping such might be, for it adds to the zest of breeding, and this last two or three years the strife has been somewhat tame. I did not, however," he continued, "expect to meet it here. Is it a new breeder?" he queried.

"I do not know," was my reply, for I had not looked to see the exhibitor's name, "but evidently someone to reckon with."

"The best way," he remarked, "will be to go and see," and that we did forthwith.

Before the pen were several well-known fanciers admiring the bird I had referred to, upon whose striking merits they were descanting. Some of these greeted Mr. Alton with practically the same

observation as my own, anticipating a rivalry that ought to be interesting.

Mr. Alton examined the bird with special care, asking a member of the committee present to be allowed to handle it, which was granted immediately. I also had the same privilege. He said scarcely a word, which was put down by not a few to a wrong cause.

"Who is the fortunate owner?" he finally asked. On turning up the catalogue we found that it was an exhibitor named Reuben Short, a man who had been a Bantam breeder for some years, living about forty miles from Northcliffe, and who, whilst possessor of a good stock, was not much known outside his immediate district, as he seldom exhibited at any of the larger shows, where he had, however, won a few prizes.

When told, Mr. Alton quietly remarked: "Well, he's got a good one this time," adding, as he turned to me, "Malpas, I want you a minute."

We went direct to the secretary's office, where Alton asked if Mr. Short had been seen at the show, to learn that such was not the case. After a short examination of other classes, and a further look at the Bantam referred to, we left the show together. Outside Mr. Alton asked:

"What do you think of that bird, Malpas?"

"He's a beauty, and ought to be the champion of the year if handled rightly," was my reply. Then I added, "But, Alton, have you sold any stock lately from which he has been bred, for he is as like your strain as two peas in a pod?"

"No; that I am sure of. He is not from any bird I have sold," laying emphasis on the last word.

"What do you mean?" I asked.

"Simply that he is Cæsar's son," he answered.

"The son of your Broxford cock!" I exclaimed.

"Yes, of that I am as certain as that you and I are walking together. He carries the hall-mark of his father, which none of you judges ever discovered, a very slight shortness in the hind-toe, that marks one family of my birds. To me that is an unmistakable sign, as I have sought to breed it out and failed.

"See here, Malpas," he continued, "I am going to be at the bottom of this. Will you go with me? I specially ask you to do so."

"Are you going to bring the police into it?" was my question.

"Not if it can be avoided," he replied. "It is a delicate and difficult matter, and I hope we can manage it unaided. What I want is my bird back."

* * * * *

The rest of the story is soon told. A couple of hours brought us to the little town where Reuben Short lived, and to his place of business, near

which was his residence and his poultry pens. The man was not there, but we saw his wife.

"Mrs. Short," said Mr. Alton—and I admired him for the almost tender manner in which he spoke all through—"I am Mr. Alton, and I have come to see your husband's Bantams."

"I am sorry," was her reply, "but no one is allowed to do that unless Short is here himself."

"The present is an exception you must make," he said, quietly; "otherwise I shall have to take action you will regret. I suggest that for your husband's sake you do what I ask."

The poor woman's face was convulsed. Without a further word spoken on either side, she led the way through a kitchen to the back. Before many minutes had elapsed Cæsar was discovered in a pen hidden from all outside observation. There was no mistaking him, and I recognised the bird at once. He was caught and basketed. Still Mrs. Short said nothing. She seemed paralysed.

As we re-entered the house, Short came in. The moment he saw Mr. Alton, he recognised the game was up.

Fortunately the shop bell rang, and Mrs. Short had to attend to a customer. In a few pregnant words Alton named his conditions—namely, that Cæsar and all chickens bred from him, including the exhibit at Northcliffe, should be handed over at once; that he should immediately dispose of his stock, and never exhibit again; and that he send £50 to the Broxford County Hospital. For his wife's sake, which Short seemed to think of more than his own, and that credit may be accorded to him, Alton agreed to the contribution being sent in the manner already described. He made it clear that unless these terms were accepted, he would at once place the business in the hands of the police authorities. Needless to say, Short acquiesced without demur.

That was how Broxford Hospital came by £50 so mysteriously. Whether Alton ever learnt how the bird had been stolen he never said. I do not know, although having views of my own.

Two or three weeks later Mr. Alton received a letter from Mrs. Short, thanking him for saving her husband from prison, which would have been his ruin, and stating that, although she did not know whence the bird had come, for months her intuition had kept her in constant fear, increased by evident signs of a similar dread in her husband lest anyone should see it. They both thanked God it was over, as that they had fallen into generous hands.

The New Address of

"The Illustrated Poultry Record"

IS

TUDOR HOUSE, TUDOR STREET, E.C.

CHICKEN MORTALITY.

By EDWARD BROWN, F.L.S.

ON all sides in this and other countries complaints are rife as to the excessive mortality in chickens, more especially those hatched and reared artificially, assuming an epidemic form in America and Belgium, the former owing to what is called white diarrhoea, the latter due to the parasite as recorded last autumn. As to the last-named, I learn that this year the disease is worse than ever, and its area has been greatly extended. In that case results are specially striking in that, as a result of concentration, a whole countryside has been devastated. From reports that have reached me, it is evident that whilst loss by chicken mortality is more distributed in the United Kingdom, varying to a greater degree by reason of differing methods adopted, yet to individuals it is serious in the extreme, threatening the poultry industry in a very vital part. The loss during the early rearing stages in the Haslington experiment was heavy, though partially explained by attacks of stoats, &c. I recently heard of an instance in which an intensive poultry farmer has this season bought a thousand day-old chickens, of which he has only been able to rear fifty. A mortality of 95 per cent. is fatal to any enterprise. If those birds were bought at 6d. each, it means that such as have been reared cost 10s. each, apart from the expense of rearing. If that continues, or becomes general, the day-old chick industry is doomed.

Hen versus Incubator.

We are here up against a momentous difficulty that cannot be ignored, demanding careful and immediate consideration. From such information as has come to hand—unfortunately incomplete, for people who are willing to talk about their successes prefer to keep quiet about their failures—it is evident that the mortality referred to is almost exclusively restricted to chickens hatched and raised artificially. The hen has some secret which no machine can possess. She goes on her way, accomplishing her task with the variations inseparable from all natural processes, but manages in one way or another to come out on top. That is why some larger operators are using hens to a much greater extent, even though machine hatching and rearing have a place. How far this will continue remains to be seen. A solution of the problem must be found in one way or the other. Whilst I do not pretend that it is possible to state absolutely what are the causes of the excessive mortality in the embryonic or chicken stages, indications are present which may help to alter a condition of affairs that is serious in the extreme. My own view is that much of the trouble arises

from almost entire substitution of artificial for natural methods, instead of making the last-named the basis and supplementing it by the former. I submit, therefore, considerations to those engaged in this work which suggest themselves as the result of prolonged experience and observations.

Not a New Problem.

A dozen years ago, when what may be termed "massed" hatching and rearing on a large scale was finding favour, mortality in the chickens presented the main difficulty. Those of us who had, up to the time named, operated on a moderate scale, in which by individual open-air brooders success had been achieved, found that experience on those lines was inadequate for more extensive and intensive methods. There is no need to repeat the story of what took place on the College Poultry Farm, Theale, for this has been told before. Suffice it to state that for three years deaths during the chicken stage of artificially hatched and reared birds were very heavy indeed, reaching in one season 45 per cent. Others there were who had a much higher average. After three years we arrived at the conclusion that this was owing to want of exercise during the post-natal stage. The chicks were provided with an abundance of food, in many cases making for softness of body as well as rapidity of growth, for which they had nothing to do save eat, with the result that the muscles were scarcely used at all, the natural functions were weakened, and there was no power of resistance. Adoption of dry and litter feeding to a greater extent altered the whole condition of affairs. From the first the chicks had to work for their food by scratching, thus following nature, in which physical vigour was increased, and also ability to resist changes of temperature and other influences. Moreover, exercise enabled the digestive processes to be carried out, which is not otherwise the case if the body is more or less inert. In-digestion means non-digestion, and food not assimilated is often a positive danger by chemical action and changes.

Seeking the Cause.

For a time, adoption of dry feeding in litter undoubtedly had the effect of checking, in this country, at any rate, chicken mortality. Such is no longer the case. I am not by nature a pessimist; but facts have to be faced as they are. The only sensible thing to do is by realisation of the true state of the case, not by turning a blind eye in the hope a change will take place. It is evident that other factors are at work, or that in the desire



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A SPLENDID EXAMPLE OF THE BLACK VARIETY OF THE ORPINGTON FOWL.

to force chickens the virtue of exercise is not fully appreciated. Such may be true in some instances, but, as a general rule, it would appear that mortality is equally great where scratch-feeding is made the basis of operations. Under such circumstances, we have to go farther back in order to find an explanation. Discovery of that will not be easy. It may involve prolonged investigation, possibly compel a complete reorganisation of methods, ere we arrive at a satisfactory result. To that end there must be an open mind, an absence of adherence to preconceived notions and ideas, and a recognition of the fact that natural forces are, after all, most potent. The marvellous advances and changes made during the last fifteen years lead to the conclusion that adaptability is a prominent feature of the poultry industry. What we must do is to take longer views, to think more of the ultimate than the immediate.

Machine Hatching and Rearing.

Previously I have said that artificial systems of hatching and rearing are only second best, and that these do not, and cannot hope to, compete with Nature's own method. Such statement has been frequently criticised on the assumption that because no practical difference could be traced in one or two generations between birds raised under the two systems, or that someone has continuously used incubators and brooders for several years, probably on a moderate scale, and finds the vigour of his stock well maintained, therefore it is erroneous. Many evidences could be adduced in proof of what I have stated above, which it is unnecessary to submit. The fact is that death in shell and mortality of chickens are much higher under machines than where hens are employed, as a hen will often bring out and successfully rear chicks where machines fail, more especially where operations are on a larger scale. That is the supreme test. Even if we recognise that incubators and brooders are not equal to hens, they have so important a part to play in future development of the poultry industry, as that it would have been impossible to attain the progress already made without their aid, I submit it is essential to recognise facts as they are, accepting such limitations as are imposed upon us, and endeavouring to discern what as yet is unrevealed. My own view is that the cause is not so much that of these useful appliances as in other directions. That is, where they are of the right type. They may contribute to the result when other conditions tend in the same direction. The best incubator and brooder, however, that was ever built will be comparatively useless if the eggs and chickens entrusted to them contain the elements making for failure.

Evils of Massing.

The tendencies with recent years have been all in the direction of mass treatment, thus reversing

natural methods. Big flocks of adult fowls, larger incubators and brooders, filling drawers with eggs to their fullest capacity, crowding brooders as full as they will hold, placing the last-named so closely together that there is only room to walk between them, chicken flats and intensive single or double floored houses, are all indications of the same policy. To a very large extent these ignore what should not be forgotten—namely, that fowls and eggs and chickens are living entities, in which the only hope is in regarding each as an individual which demands space for action and abundance of fresh air. I say nothing now with regard to questions of soil taint owing to manurial influences and to exhaustion of elements, for which no substitute has yet been discovered. That frequently accompanies mass treatment, and powerfully contributes to results from other causes. My own view is that the risks of mass treatment have never been recognised. These are met with in all forms of life, human and animal. It is the problem ever presenting itself under modern conditions, seen in respect to barrack and cottage homes. Massing, as in the case of fattening, or even for egg-production, may be carried out with a large measure of success, provided that the stock from which the birds are obtained are kept upon extensive lines. The birds put up for fattening soon terminate their career. Where a great amount of harm results is when pullets raised and kept en masse are used as breeders. That will do much, yet not everything. Incubator drawers should never be crowded, and abundance of space in brooders is the way of success. It is the old battle of extensive versus intensive which is being fought. The former has always been permanently victorious, and is repeating the process. What has yet to be learnt is how far we can go in modification of the limitations thus imposed. Whatever the form ultimately adopted, evidences are in favour of the contention that larger flocks yield the greater results.

Contributory Influences.

In such a case as that already named, where 95 per cent. of day-old chicks have died, it would be a most valuable contribution to study of this question if an investigation were made right back to the parents, inclusive of the conditions under which these are kept. Probably a good deal of light would be thrown upon the problem. Enough is known respecting transit of such chicks, even over long distances, to show that, provided these are from vigorous stock, they suffer no harm if dispatched in small groups. My opinion is that not more than twenty-five should be sent in one package unless it is divided and abundantly supplied with fresh air. To mass a larger number together must mean that those in the centre are all the time breathing tainted air, in which respect nothing tends more to reduction of vitality. That

may not be serious where the journey is short. If it involves many hours, the results will be much more marked. That, therefore, should be the first step in such inquiry.

The assumption is reasonable that these day-old chicks were incubator-hatched. Hence it is important to learn whether the machines were worked under suitable conditions and were in themselves of a satisfactory build. During the busy season there is a temptation not only to fill incubators to their full capacity, but also to crowd as many into the hatching-room as it will hold. That is a foolish policy. An egg requires an abundant and constant supply of fresh, sweet air, as does the chicken that may be evolved from it. In

is quite sufficient. Upon that question, however, more knowledge is required.

The Parents.

We are thus brought back to the birds from which the eggs are obtained. What we should seek to learn are, first, whether these are healthy and vigorous; second, their age; and, third, the conditions under which they are kept. Upon the first of these there can be no conflict of opinion. Constitutional vigour in the parents must precede that of the chickens. Any debility or delicacy will be emphasised in the progeny. In these days of trap-nesting, of pedigree layers, of forced feeding, there is a special danger of using birds



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HOUDANS ON A WELL-KNOWN EAST ANGLIAN FARM.

this respect many incubator rooms fail. The burning of a number of lamps in a room must vitiate the atmosphere unless the ventilation is complete. Where that is not the case embryonic mortality will be increased, and such chicks as emerge start their brief careers with a lessened reserve of vitality. The safe line for an incubator house is two cubic feet of air space for every egg, which may appear excessive but is not so. Thus, in a room 20ft. by 15ft. and 8ft. to the ceiling there are 2,400 cubic feet, and on the basis laid down its capacity is 1,200 eggs.

I am also inclined to the opinion that large drawers are a mistake, and that 100 eggs in each

as breeding stock that ought never to be mated for that purpose. I have sometimes wondered whether striving for high egg records during the last ten years has not done more harm than half a century of fancy breeding. As to the second point—namely, age of parents—the consensus of balanced and experienced opinion is against the use of yearlings for breeding; yet it is probably practised to a greater extent than ever, more especially with vendors of eggs for hatching and day-old chicks who have no responsibility for rearing. So long as they deliver fertile eggs and live chickens, that is the main thing. That is a foolish idea, which must react upon themselves.

With regard to the third point named, conditions, this is also of great importance. I have heard of the country being scoured round by owners of hatching plants to obtain eggs. Where that is the case not alone is there an entire absence of control as to quality of breeding stock, but also want of knowledge whether these are kept in such a manner as to afford an opportunity for production of strongly fertilised eggs. A further question is here raised—namely, whether eggs laid by yarded fowls contain nutritive elements for the embryo to the same degree as if on range. That may yet have to be investigated.

Conclusion.

Such are some of the phases presenting themselves for consideration and compelling attention. I submit them without any attempt to dogmatise, simply in order to see if the dangers ahead can be avoided. Unless chicken mortality, whether during the embryonic or post-hatching stage, can be checked, the results to breeders who rear in larger numbers and to those who buy eggs for hatching or chicks will be serious in the extreme, and cause a heavy decline in what has been a profitable and useful branch of the poultry industry.

MODERN SCIENCE AND POULTRY PROBLEMS.

III.—ACQUIRED CHARACTERS.

By OSCAR SMART.

(Continued from page 403.)

ACQUIRED FECUNDITY.—By this is meant that acceleration of production which is obtained by the use of forcing condiments. This only represents an increased production in one sense—it does not actually mean that the hen acquires the power of laying more eggs, but that she is stimulated to produce her full complement in a very much shorter period. This acceleration of production does not in any sense increase a hen's breeding value; on the contrary, it detracts from it, for not only are her eggs less likely to hatch, but the mortality among her offspring is greatly increased by her own over-stimulation. Where, however, hens are kept purely for egg-production, and not for stock, the use of mild sexual irritants may be resorted to in order to acquire that "extra production" which high-class laying stock inherit from their parents.

In one of Dr. Raymond Pearl's very able papers he mentions the influence of the daily removal of the eggs as a factor making for increased egg-production. On first sight this might be regarded as an acquired modification; but it is not so in the strict sense of that term. It comes under that category of modifications that are brought about by the accumulated effects of use and disuse. Such effects are said in time to become represented in the germ-cells and transmitted to the progeny. We will examine this matter more carefully in its proper place.

ACQUIRED COLOUR.—Colour is frequently modified by the use of the sun, by iron, by certain methods of feeding, and, of course, by the use of acids and other bleaching agents. Many modifications in colour are, however, due to pathological causes associated with age. More especially is this seen in the case of yellow pigment and in

those composite colours where yellow enters as one of the primary factors. The leg colour of yellow-legged birds and the plumage of buff varieties becomes perceptibly paler with age. Why is this? Knowing that yellow pigment contains mineral properties, the solution to this problem should not be difficult.

With advancing age pathological changes are being effected in the bird's organism, and among these is a reduction in the number and power—that is to say, power as carriers of salts and phosphates—of the red-blood corpuscles. While the body is developing, and for a short subsequent period, these corpuscles are actively concerned in distributing, by means of the blood, the mineral matter necessary to the development and rebuilding of tissue. It will be observed during this period that the colour is particularly good; but later in life, when the rebuilding processes have become less, and a natural atrophy of tissue indicates those pathological changes which we call age, we find that the buff or yellow colour becomes paler in strong correlation with the ever-lessening supply of mineral matter which is being conveyed to the tissue.

Another instance of modification in colour brought about by pathological changes will, by its converse nature, support this contention. If the colour of buff and yellow varieties becomes paler when less mineral matter is being supplied to the plumage, we should expect the white of white birds to become whiter at the same period and to be due to the same cause. This we have found to be so. A White Orpington improves in purity of colour each year; a bird that will win in his first season will be found of greater value for this purpose, if judiciously fed, as he grows older.

Colour may be acquired in old birds by supply-

ing the ever-decreasing red-blood corpuscles with iron, turmeric, or any other colouring matter.

ACQUIRED MALFORMATIONS.—Many malformations are noticeable at birth; these are naturally of genetical origin. There are others, and more especially that known as "crooked breast-bone," which are frequently acquired. The genetical and the acquired crooked breast-bone in the majority of cases are easily distinguished one from the other: (1) by the acquired condition, usually consisting of a single indent in the posterior of the breast-bone; while (2) the genetical malformation usually shows the breast-bone twisted more or less into the shape of the letter "S." Of course there are cases, although they are very rare, where

terest us here, but they will claim a small measure of attention in a later article.

PRACTICAL HINTS.

The study of acquired characters in fowls has a great and ever-growing value to practical poultry-breeders. The chief points of interest may be summarised under a few brief headings:

1. When the stock is only of moderate value as layers, some improvement, at very small cost, may be effected in the individual production by the use of stimulating condiments, which, acting as sexual irritants, will greatly improve egg-production during the pullet year. The eggs, however, from stock thus stimulated should on *no account* be used for incubation.



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IN A GERMAN ORCHARD.

the genetical malformation also consists of a single indent exactly resembling the acquired form, but in this case the indent shows at birth. It will be advisable to bear these few remarks in mind, for we shall have something further to say on the subject next month when dealing with the inheritance of acquired characters.

In addition to crooked breast-bone, those malformations brought about by cramp, accidents, disease, &c., must also be considered in the light of acquired modifications.

ACQUIRED DISEASE.—An acquired disease is one due to infection, bad hygienic arrangements, the eating of tainted foods, poisoning, or generally bad management. They do not particularly in-

2. Where chickens are being reared for the market their growth may be accelerated by the free use of milk, grass, bean leaves, carrot-tops (these latter boiled, minced, and mixed with the soft food), and any other foods rich in lime-salts.

3. The combs of certain exhibition fowls may, when it is thought advisable, be greatly increased in size by a liberal supply of red meat and by keeping them in very warm pens.

4. By proper training (that is, by bringing certain muscles into play) the structural "points" of Game, Aseels, Malays, and similar breeds may be greatly improved.

5. The effects of age in diluting the leg and plumage colour of certain varieties may, to a large

extent, be counteracted by the use of iron, turmeric, cayenne, &c. In this direction the action of hempseed requires more careful study; the value of hempseed as a colour agent is not yet fully determined.

6. A knowledge of the conditions making for "acquired diseases" is essential. This should include the study of bacteriology, hygiene, and pathology, all of which are more closely associated

with the science of genetics than is generally supposed.

In this paper I have attempted nothing more than to give a very brief outline of a few modifications in fowls which are of an acquired nature. It is necessary to thoroughly understand what is meant by an "acquired character" before we can seriously grapple with many of the graver problems of heredity.

THE SMALLHOLDER'S FIRST YEAR.

CHAPTER VII.

THE PURCHASE OF FOODS AND METHODS OF FEEDING.

ONE of the most important factors making for the success of any and every branch of poultry-keeping lies in the question of feeding. Perhaps more money is wasted in this direction than in any other on the majority of places where fowls are kept for profit. It is not only that sometimes too much food is given, or at others that the wrong kind of feeding stuffs is employed, but it is frequently that the cost of feeding is so great that all the profit is eaten up by the extra cost of production.

When dealing with the whole question of feeding poultry on a small holding it is better to classify the various kinds of food into three divisions. These are natural food, home-grown food, and purchased food. We may say right here that if all feeding stuffs have to be bought there is little possibility of making this section of the work on a small holding successful. The cost under such conditions will amount to about seven shillings per bird per annum for food alone, and each hen must lay a large number of eggs to produce a return sufficient to pay for this. Afterwards the cost of production in other directions has to be met—then comes what profit there may be.

There is but little doubt that the best food of all for our birds is that which they gather for themselves when they have their liberty and are allowed to wander at will over the land. There is something in this material which renders it considerably better for all purposes, except that of fattening, than any artificial food that can be procured. As we have explained previously, however, under small-holding conditions it is not possible to give our birds a free range, therefore the quantity of this class of food that is available is very small. It must be made up in other ways.

The main stay on a farm or holding should be the home-grown crops. The value of these is less at the spot of production than if they had to be bought in the open market. Although, as we shall have to point out shortly, the best qualities are none too good for poultry feeding, yet at the same time when the feeding stuffs are grown on the place it is possible to feed crops that are only second-rate. It will depend to a great extent upon circumstances, but cases arise in which it sometimes pays better to dispose of the first quality only, retaining the second grade for home use. If the fowls are made the principal crop on the holding the cultivation of the ground should be of such a

nature as will produce those substances that are most needed for poultry feeding.

No matter what size the holding may be, or what crops are taken off the land there are certain feeding stuffs that must be purchased—foods that it is not possible or not expedient to grow at home. In all cases, however, these should be looked upon as supplementary and not as making up the chief ingredient in the feeding diet. When buying feeding materials insist on having the best quality, as this pays in the long run. It is found that the percentage of digestible constituents is higher proportionately than with second or third grades. The digestible substances in a food are the only ones which are utilised by the bird body, and, therefore, this point will be apparent to all. The only exceptions we would make in this connection are with reference to wheat and barley. It is a mistake to buy the finest milling and malting samples of these two grains, since the additional cost is above the value. In both instances a good sample is wanted, but not those that are used for the purposes named.

One other purchased food must be mentioned. We refer to animal food in one form or another. This may be granulated meat, meat meal, or fresh refuse meat. These are essential for growing stock and for laying hens. The same rule applies here—namely, that the best samples should be secured. It pays to give a price of about £1 per hundredweight for the first two mentioned, since the feeding value is greater and the quality in every direction is better than in these samples that can be bought for little more than half this sum.

Methods of Feeding.

As we explained in Chapter V., the only practical ways of keeping poultry on a small holding are under the semi-intensive and the intensive systems. The latter of these is ruled out, since it has not yet been proved to be a success. The results, however, are the same—namely, that the birds must be specially fed, since they have little or no opportunity of gathering natural food for themselves.

The nature and the quality of the food are both important, but the method of feeding adopted is equally productive of good or bad results. Whatever foods are fed and whatever method of feeding is followed, one thing is necessary—namely, that the birds should be encouraged to take exercise, so that their health may be maintained. If we are going to keep our birds in proper laying trim, they must be in store condition. The accumulation of fat round the organs of the body means that very few eggs will be forthcoming, there-

fore whatever we do we must see to it that the fowls receive only that food, and in such a way, as will render this condition possible.

Two systems can be followed—namely, giving the meals either in the form of a wet mash or a dry mash. We believe that the results that accrue are equal in both cases, and there is no doubt but that the latter does save a considerable amount of labour. Similar foods can be employed for both mashes. In addition to the mash hard corn and green food must be fed.

When feeding wet mash we have found the best plan to be to give hard grain in the litter in the morning—this can be scattered over the floor of the house last thing at night to save time in the morning—a feed of green food in the middle of the day, and a little hard

form of self-feeding corn hopper, which has given excellent results. To construct this feeder take three yards of very small mesh wire-netting, and roll it into a cylinder 1ft. in diameter. This should be done in such a way that the meshes do not come together, but overlap. A piece of cardboard is placed in the bottom to form a floor. If such an apparatus is filled with the corn and hung up about 15 to 18 inches from the ground, it forms an excellent self-feeder. The birds will soon learn to tap the netting, when the corn will fall out on to the litter, where they have to scratch to find it.

A variety of foods can be used for the mashes, but the following has proved successful: 2 parts of middlings or ground oats, 2 parts of barley meal, 1 part of



FEEDING STOCK DUCKS ON A SMALL-HOLDING.

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grain at the same time in the case of very inclement weather, and a full feed of the soft mash at night before the birds go to roost.

In the case of the dry mash this should be fed in a self-feeding hopper, and should be before the birds all the time. In addition one feed of hard food a day and a feed of green food should be given. These latter should be given at mid-day. In the past it has been considered that to allow the food to remain in front of the birds all day was a bad thing, but in this case the food is not sufficiently appetising for the fowls to overeat themselves.

We have been using during the past spring a new

wheat bran, and 2 parts of clover hay chaff. Any kind of young vegetable stuff can be used for the green food, such as cabbages, lettuce leaves, Jerusalem artichokes, mangels, grass, &c. If oats are grown on the holding these should form the principal hard food, but wheat and barley, together with dari and buckwheat, may also be employed.

To complete the feeding there should be a three-compartment hopper containing granulated meat, broken vegetable charcoal, and grit. The second substance, though it can hardly be reckoned as a food, is very valuable, and should find a place in the dietary of all fowls.

A GUINEA PER HEN PROFIT.

A CANADIAN POULTRY-WOMAN WINS SUCCESS.

By WALTER JAMES BROWN (*Aylmer, Canada*).

IT is a tradition on the farms of the Province of Ontario, Canada, that women are the best poultry-keepers. There are scores of farmers' wives who pay their ordinary household expenses and provide their clothing and spending money besides from the revenues of the poultry-yards. As the science and art of poultry-culture become better defined and more thoroughly understood, the profits from the industry are greatly increased. That it pays to study the business of poultry-keeping there can be no doubt. When marked success is achieved it is found that the principles that are now taught in the best poultry schools have been put into practice. When failure results it is also manifest that those principles have been ignored. It is not often, however, even in Canada, that a net profit of a guinea per hen is secured by a farmer's wife from her flock of hens. This unique experience is worthy of record.

Mrs. S. L. Brown, of Whitby, Ontario, undertook in the fall of 1911 to care for a flock of thirty Barred Plymouth Rock hens. The scheme of management and the system of book-keeping to be followed were outlined by Mr. R. M. Tipper, the district representative of the Ontario Department of Agriculture. A modern poultry-house was built. It was 10ft. by 12ft., single-boarded, with battens to prevent draughts. The cost of construction was about £5 5s. Pure-bred pullets of a bred-to-stay strain were selected. Mrs. Brown owned the birds and received the rewards, but she promised to follow the plan as outlined in detail by Mr. Tipper. The following facts were gleaned from the books of this flock for the year ending October 31, 1913. The record is worthy of study:

RETURNS FROM SALE OF EGGS.

	£	s.	d.
November—36 eggs at 1/10 doz	...	5	6
December—375 eggs at 1/9½—1/11 doz.	...	2	17 11
January—571 eggs at 1/0—1/3 doz.	...	2	12 4
February—561 eggs at 1/0½—1/1 doz.	...	2	9 8
March—666 eggs at 10½d.—11½d. doz.	...	2	9 9½
April—659 eggs at 9d.—9½d. doz.	...	2	2 10½
May—472 eggs at 9½d. doz.	...	1	7 10
June—391 eggs at 11d. doz.	...	1	9 10½
July—313 eggs at 11½d.—1/0½ doz	...	1	6 10
August—295 eggs at 1/0½—1/1 doz.	...	1	6 3
September—160 eggs at 1/2 doz.	...	15	6½
October—39 eggs at 1/4 doz.	...	4	4
Total	...	£19	8 9
Increase on 120 doz. sold for hatching at 1/5½ to 2/1 per doz.	...	3	19 0½
Total	...	£23	7 9½

Total eggs produced, 4,434, or 151 eggs per hen.

RETURNS FROM SALE OF FOWL.

	£	s.	d.
17 cockerels sold for breeding at 5/2½...	...	4	8 6½
1 cockerel sold for breeding	...	8	4
6 pullets sold for breeding	...	1	5 0
6 pullets sold for breeding at 3/1½	...	18	9
6 cockerels, dressed, 32lbs, at 10d.	...	1	6 8
48 cockerels, dressed, 268lbs. at 9d.	...	10	1 0
Total	...	£18	8 3½
Fowl on hand—			
85 pullets at 4/2	...	17	14 2
Consumed at home—			
25 fowls at 2/1	...	2	12 1
Total value fowl sold, consumed, and on hand	...	£38	14 6½

FEED AND CARE EXPENSES.

	£	s.	d.
Six winter months—31 birds at 5½d. per bird per month	...	4	5 3
Six summer months—31 birds at 5d. per bird per month	...	3	17 6
Total	...	£8	2 9
Hatching eggs—705 at 1/5½ per dozen	...	4	5 8
Coal oil for incubator	...	7	6
Food for growing stock	...	13	16 10½
Express charges on dressed poultry shipped	...	7	1
Total	...	£18	17 1½
Total for feed and care	...	£26	19 10½

PROFITS FROM YEAR'S WORK.

	£	s.	d.	£	s.	d.
Value of eggs produced	...	23	7 9½			
Value of poultry produced	...	38	14 6½			
			62	2	4	
Expenses or food, &c., for laying stock	...	8	2 9			
Expenses for food, etc., for young stock	...	18	17 1½			
			25	19	10½	
Net gain	...	£35	2 5½			

The parent stock, consisting of thirty two-year-old hens and a cock, were still on hand when the foregoing summary was prepared. The management was very simple. During the winter and spring months, until the hatching season was over, the hens were confined to the house or to a small run. After June 1 they were allowed a free range.

The winter feed consisted of whole oats and barley, mostly oats, with a little corn in cold weather. A dry mash, consisting of ground oats, barley, shorts, and bran, was kept in the hopper before the birds at all times. Mangels were used for green food, and buttermilk and water were provided for drink. Grit, oyster shell, and charcoal were also provided. The summer feeding was the same as the winter, without corn, buttermilk, or mangels, and the dry bran-mash was reduced. Regularity of feeding, plenty of pure air, and exercise were the essentials in securing these results.

THE SECOND PAYNTER EXPERIMENT.

AS already announced, the Board of Agriculture in the early part of the year transferred Mr. F. G. Paynter from Haslington Hall, Cheshire, to Guilden Morden, Cambs., the last-named of which is near Royston, and it will be of interest to see what are the results attained. Whilst there are good reasons that may be adduced in favour of this transference, it is none the less regrettable; first, from the fact that the very essence of the Paynter system is that it shall form part of a regular rotation in which the land vacated shall be cropped, the manure put into the soil will not be credited to the poultry as should be the case; and, further, that for comparative purposes similar conditions are not available. No judgment can be formed that is satisfactory until the entire ex-

arrangement would be that visitors should be excluded altogether. That, however, is difficult when the object is educational and money is contributed from public funds. A development which can be commended is that the Board of Agriculture has engaged a skilled fatterer, who takes the birds at an agreed price, finishes them off, and sells dead. He occupies to Mr. Paynter the place of the fatterer in relation to a smallholder. This is a most interesting addition, one which should help the main experiment.

Generally speaking the work is being carried out on similar lines to that at Haslington Hall. The eggs are incubated artificially, two rooms in the house being used for that purpose. When hatched the chicks are first placed in brooders on the lawn, as shown in one



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ON MR. PAYNTER'S FARM AT GUILDEN MORDEN,

Where the chickens are put during the first few days. Afterwards they are removed to the rearing ground seen in the background.

periment, extending over four years, inclusive of cropping as well as chicken raising, is carried out. That is in justice to Mr. Paynter and those who have supported him.

In some directions the new *locale* at Guilden Morden is rather more favourable, as the land looks kindlier. It is useless attempting growing good table chickens unless the soil is suitable. To that extent, therefore, it is an improvement. Further, a limitation has been imposed upon visitors, who, unless for special purposes, are only permitted one afternoon each week. That avoids the expenditure of time which must have taxed Mr. Paynter greatly at Haslington, and is also much better for the birds, who have a much better chance of making growth than is the case if daily disturbed by sightseers. For many reasons the preferable

of our illustrations, and afterwards transferred to the main runs. The last-named are excellently arranged, better, we think, than before. As a measure of protection against enemies, in which direction there was great loss last year, the pens for younger chickens are in the centre of the block, with older birds in the runs on the outside of the four-acre square. The houses used are of a useful type, without any elaboration or complexity. In each run is placed one or more round galvanised iron bins, painted red, with lids, in which grain for a week can be kept, thus reducing labour.

This year better arrangements have been made as to the class of eggs obtained than was the case before, with the result that the chickens are of a much higher type, calculated to make more rapid growth. At the

time of our visit there were about 4,000 on the place, and a fair number had been sold. These were mainly Speckled Sussex, Faverolles, and Orpingtons. If an enterprise of this kind is to be successful the material must be of the right kind, and arrangements for a regular and adequate supply is a question of organisation which cannot be carried out all at once. When the record of the year's work is published it will be very interesting to study the effect upon the final result.

One fact must be mentioned—namely, that apart from the fattener, who does not enter into the main operations, all the work is done by Mr. Paynter and a boy. A smallholder would in the great majority of

DANISH EGGS IN GERMANY.

THE export of eggs from Denmark to Germany is steadily increasing, though not very rapidly. The figures for the last five years are as follows:

		Quantities. Gt. Hds.		Values in £'s.
1909	...	18,550	...	—
1910	...	56,933	...	25,425
1911	...	104,316	...	48,262
1912	...	141,000	...	67,331
1913	...	150,883	...	73,800

Considering the proximity of the two countries, there are great possibilities of further increase.



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THE HOUSE AT GULDEN MORDEN AND PART OF THE REARING GROUND.

cases have his wife to help him. Such assistance is not here available. The labour of attending to incubators and chickens during the growing period must be considerable, demanding constant and unceasing work.

Mr. Chaplin and His Hens.

In a discussion in the House of Commons on the Weekly Rest Bill, Mr. Henry Chaplin is reported to have said that he had a little thatched cottage within easy reach of London, and he had a small holding of about two roods of land attached, and he had endeavoured to start a small poultry farm of his own, but he was alarmed by the statement made by Mr. Booth that under this Bill all possibility of getting new-laid eggs, which he happened to have rather a taste for, on Sunday would be done for. If this sort of thing went on it would soon be made an offence for hens to lay eggs or for cows to give milk on Sundays.

ROUP.

ROUP is probably the most common disease among poultry. It is the easiest disease to prevent and the hardest to cure. When it is noticed that a fowl has a slight cold, such as watering at the nostrils and eyes, or sneezing, the trouble can be righted by removing the patient to a warm, dry place, and giving a one-grain quinine pill each night for three nights in succession. If there is a swelling of the face, bathe with hot water, and when dry anoint with vaseline. If there is canker in the mouth, apply a little salt to the canker. If these slight ailments are promptly attended to there need be no further trouble, but if neglected it will not be very long before roup sets in, and, being of a very contagious nature, will soon spread among the more or less weak birds of the flock.—*Canadian Countryman*.

THE "TIMES" ON POULTRY QUESTIONS.

ON June 8 there was published as supplement to the *Times* a great Food Number, one of the remarkable series which have from time to time been issued by our contemporary, whose enterprise can be heartily commended. The supplement consisted of forty-four pages, packed with facts and figures, surveying the whole field of our food supplies, whether native or foreign—indeed a remarkable production.

Poultry subjects are well represented, and the place of eggs and poultry thus recognised. Some of the statistics are familiar to our readers. Given in the *Times* these cannot fail to command widespread attention. For those who desire to study the questions raised in detail it may be here mentioned that the supplement will be brought out as a bound volume at 6s., with which will be included several articles for which a place could not be found.

Below we give a number of items culled from this issue, some of which are in other than the egg and poultry section :

AMERICAN MENACE.

Eight years ago our imports of chilled and frozen meat from the United States were valued at over £5,000,000. In 1912 they had sunk to £15,000. This is by far the most striking change that is at present taking place in the food trade conditions of the world. It means that the once great export meat trade of the United States is now practically non-existent, and that unless the Americans take steps to increase their home production of this staple article of food they will not only cease to export, but will become to an increasing extent rival buyers in the markets of the world with ourselves and other nations. We are also threatened with the same menace in the egg trade by the United States and Germany, both of which, instead of being able to supply their own demand for eggs, are now buying from Denmark and Russia and other countries from whom we have hitherto derived supplies.

WHAT MIGHT BE.

In reality not much comfort is to be gleaned from the apparently hopeful examples of Ireland, Denmark, and Holland. If the British Isles produced as much food in proportion to their size as the last of these countries, they would have more than enough for their wants. They could even become food exporters instead of buying from abroad. There seems, however, to be little chance of this ideal being realised.

INTENSIVE METHODS.

Intensive cultivation means the effort to increase the average productiveness of the land, and any practicable system or method which makes this possible and so lessens the country's dependence on imported supplies is unreservedly to be welcomed. But it will be found that the efforts to increase production are not confined to any one class of cultivators, and some of the most extensive farmers are able, by their skilful management and use of modern resources, to show what has good claim to be called an intensive yield from their land.

A WORD FOR THE GOOSE.

Of birds the goose is the most economical, and can be sold profitably at 8d. per lb. for a well-nourished and plump bird. In flavour it is, of course, excellent, and its alleged "richness" is in reality an economy, as it makes other rich food at the same meal undesirable. The use of eggs, even at 2d. each, is on the side of frugality, owing to the extremely concentrated nature of the food and the absence of all waste.

TURKEY HISTORY.

Turkeys allowed to breed in woods and become wild not only make rare sport, but develop flavour and cease to be the somewhat dry and flavourless food which too much of our modern Christmas fare now is. King George III. was successful in introducing turkeys for sport into Richmond Park; the birds increased, multiplied, and gave good sport and were excellent eating. Unhappily, the fights between gamekeepers and poachers proved on more than one occasion unusually sanguinary, so that the attention of Parliament was attracted to the number of lives lost. The kindhearted sovereign finally gave up the turkeys and had them killed off.

INCREASED IMPORTS.

IMPORTS IN MILLION CWTs.					
Years.	Wheat and Flour.	Meat.	Butter and Cheese.	Eggs in millions.	
1861-65	34.6	1.5	1.8	280	
1866-70	37.2	1.1	2.0	418	
1871-75	50.4	3.1	2.7	602	
1876-80	63.3	5.8	3.6	760	
1881-85	77.2	6.0	4.1	901	
1886-90	77.7	7.6	4.7	1,123	
1891-95	96.5	10.4	5.7	1,377	
1896-1900	95.9	15.7	6.6	1,494	
1901-05	111.6	17.3	7.5	2,271	
1906-10	113.9	18.8	7.6	2,200	

GUINEA FOWLS.

There is much more hope of the Pintard or Guinea Fowl, which is a really valuable addition to the bird course and is not difficult to rear or fatten. The bird is an exceedingly sightly one and has been strangely neglected. It roosts in the lower branches of trees, in farm outhouses among the tools, and in fact in almost any shelter. The popularisation of its eggs is greatly to be desired, as they are rich and good food and of an attractive colour. The flesh is in taste somewhat between fowl and game and goes pre-eminently well with salad. If more trouble were spent on selections for table use the bird might soon gain a lasting vogue. It is an industrious and useful forager, being an immense devourer of insects. The guinea fowl is particularly handy for tiding us over the time between Candlemas and Easter. Guinea fowl can be "swarmed" in coverts by themselves, and they are also valuable as the most alert of birds, giving note of the most casual or cautious footfall at night. On the whole we may say with some confidence that the guinea fowl is likely to be heard of much more in the present than in the last century, and under proper selection to become a substantial addition to our foods.

IRISH EGGS AND POULTRY.

Irish eggs are of the highest quality, and it is an acknowledged fact that the Irish new-laid hen egg is the best that finds its way to British markets. This

excellence is probably due to the fact that the conditions under which Irish poultry are kept are very well suited to egg production, as they are generally permitted to range freely over considerable areas. This is good for the health of the birds, and incidentally it increases the number and quality of their eggs. Again, Ireland, a country of small holdings, is specially suitable for poultry-keeping, for it is an industry which gives a quick, constant, and regular return and requires comparatively little capital outlay.

Whilst egg production must continue to be the mainstay of the poultry-keeping industry in Ireland, the rearing of table poultry is in itself of sufficient importance to demand serious attention, and is, moreover, capable of very considerable development. The value of the export of poultry from Ireland to Great Britain in 1912 exceeded £1,037,000, or nearly four times as much as the poultry trade of Russia, her nearest competitor. About one-third of the Irish exports of poultry consists of live birds.

The raising of market chickens is confined chiefly to certain parts of the country, notably the counties of Kilkenny, Carlow, Wexford, and Waterford. Good chickens are also produced in some areas in the north of Ireland—the districts of Lisburn, Saintfield, Lurgan and Portadown in particular. A large portion of the chickens reared are exported alive to English fattening centres, although of late years efforts have been made to promote poultry fattening in Ireland. Thus the Department of Agriculture established at Rathdrum, county Wicklow, a training school for this purpose.

HALF A HEN PER UNIT.

The relationship of the number of consumers to that of the adult poultry supplying them with eggs and flesh is an important consideration. On this basis it is interesting to note that on the farms of the country there is only 0.49 fowl (a fraction under half a hen) per unit of the population in England; in Wales, 0.38 (a fraction over a third of a hen); in Scotland, 0.59 (slightly over half a hen); and in Ireland, 4.38 hens (say, $4\frac{1}{3}$) per unit of population. The average for the entire kingdom is 0.88 hen per unit, that is to say, 88 fowls for every 100 inhabitants of these islands. Ireland is an exporting country, while England is not. Upon the present basis it is impossible for the present poultry population to supply the needs of our people, even if we add the large number kept by householders and occupiers of less than an acre of land, which is not included in the British figures. The average consumption of eggs in the United Kingdom is estimated at 111 per unit per annum, of which 54 are produced at home and 57 are imported.

IMPORTANCE OF BRITISH DEVELOPMENT.

It is evident, therefore, that the United Kingdom could produce all the eggs and poultry required without difficulty. The value of imported supplies in 1913 was £10,500,000; of native produce, £14,500,000. If the present poultry population were doubled, which in Britain could be accomplished in two years, there would be an abundant supply, and $14\frac{1}{2}$ million pounds sterling added to the production of the country annually.

For the development of this mine of unrealised treasure efforts must be put forth in two directions. First, the standard of quality in home produce must

be raised. Producers in the British Isles have the best markets in the world at their doors. Secondly, there should be a determined and sustained attempt on the part of central and local authorities, of colleges and county education committees, to promote and develop the industry on practical and scientific lines, in which respect some of these bodies have been lamentably supine, probably because they did not realise the importance of the subject. For every £1,000 expended upon poultry annually in the United Kingdom there is probably not more than 6s. 8d. spent on education in and promotion of the poultry industry.

THE AMERICAN FACTOR.

American buyers are looking to Europe. From December to February last 273,382 great hundreds of eggs were shipped to American ports, valued at about £165,000. In December 5,000 English turkeys were purchased in London and sent across the Atlantic, for this species of poultry appears to be receding as population increases. In one week of March 25,000 English chickens were bought in London for the States. If the average consumption of eggs in the States per head of the population is the same as in Britain, the 90 million people there consume about 700,000 tons of eggs annually. Of eggs imported into the United Kingdom, Russian and Danish supplies were in 1913 72.83 per cent. of the total received from foreign countries, about 130,000 tons. Were all these deviated to America they would only represent a fraction over 20 per unit of population.

The American menace is, therefore, a factor to be considered. Unless our own people increase their production to meet the new conditions, a sixpenny egg in November is a possibility.

PATRIOTIC POULTRY-KEEPING.

THE Irish writer, George A. Birmingham, in "The Red Hand of Ulster," makes one of his characters, Lord Kilmore, say:

"The rearing of poultry is one of the things I do in order to benefit my country. Quite ordinary chickens satisfy my personal needs, and the egg of the modest barndoor fowl is all I ask at breakfast time. But an energetic young lady in a short tweed skirt and thick brown boots explained to me two years ago that Ireland would be a much happier country if everybody in it kept fowls with long pedigrees. She must have been right about this, because the Government paid her a small salary to go round the country saying it; and no Government, not even ours, would pay people to say what is not true. Her plan for introducing superior hens into the homes of the people was that I should undertake the care of such birds as she sent me, and give their eggs, under certain conditions, to anyone who asked for them. This I agreed to do, and my new fowl-yard, arranged exactly as the young lady in thick boots wished, is my latest effort in patriotism."

OUR NEW ADDRESS IS IMPORTANT:

TUDOR HOUSE, TUDOR STREET,
LONDON, E.C.

TREATMENT OF FORWARD PULLETS.

By FRED. W. PARTON (the University, Leeds).

IT is very often the poultry-keeper's proud boast that he has raised pullets which commenced to lay when they were sixteen or eighteen weeks old! This I regard rather as a misfortune, since these prematurely developed birds very seldom justify their inclusion either in the breeding-pen or general laying flock. It is very frequently found that, so far as their growth is concerned, it is a case of arrested development; and their first real laying year is a disappointment, and the first few eggs produced during that period cannot be seriously regarded. The second year is a still greater disappointment. It is, of course, in some cases a result for which the owner is in nowise to blame, since the individual pullets vary very considerably in the rapidity with which they mature. It is, however, frequently mismanagement on the owner's part, in that he has not kept an eye upon the most forward pullets, and kept, as far as possible, their precocity in check.

The man whose chief aim is egg-production should endeavour by every means in his power gradually to bring his pullets on, so that they have reached laying condition by the first or second week in November; and it is to this end that the successful poultry-keeper devotes all his energies. It is necessary to select the right breeds, and these should be hatched in the spring of the year, and, by proper feeding, housing, and general management, the birds should be ready to begin their winter's work early in the month of November. The condition of the weather has, of course, a great deal to do with the matter, and a warm and genial spring will expedite matters very considerably, especially if this good start, which the early months of the year has given, is continued by an equally favourable summer. This may entirely upset the first week of November ideal, and many of the pullets may have started to lay long before this period. This is distinctly a disadvantage, because these forward pullets will in all probability fall into a late moult. Supposing they fortunately miss this, they will, almost to a certainty, cease laying as soon as the weather becomes cold, and thus their regular laying is delayed beyond the time when the more slowly growing varieties are in full and constant lay.

One of the most common mistakes made, not only by the novice but by men of many years' experience, is that of hatching non-sitting breeds too early in the year. Such breeds as Campines, Leghorns, and Anconas mature much more rapidly than the heavier breeds, and were these birds hatched, say, up to the end of May, or even the first week of June, they would probably be laying quite as soon as Wyandottes, Plymouth

Rocks, Orpingtons, or Rhode Island Reds that made their appearance in March and April.

A further disadvantage of too early laying is that these precocious pullets very seldom attain the size that is necessary to reach the standard weight of the particular breed to which they belong. Not that it is desirable to aim at abnormally large birds when egg-production is in chief request, since in the majority of cases the smaller birds are the more prolific. At the same time, a bird whose growth has been stunted through too early laying is seldom much good in its second year. Discretion is, therefore, necessary on the part of the owner to know whether the pullets are maturing in a gradual and natural manner, or if they are unduly precocious. The latter is usually the result of too stimulating foods, which have the effect of ripening the ova and bringing them forward too rapidly.

It is much too early to speak of this year's pullets commencing to lay, but it is only by dealing with the matter well in advance that we may hope to warn the unwary against the dangers of the too-forward pullet.

The pullets should be very carefully observed, and when they have reached an age that they ought naturally to begin laying, and their general appearance, such as brightness of comb, great activity, and brilliancy of plumage, indicates the near approach of egg-production and yet no eggs are laid, we may be quite certain that something is wrong in the method of treatment. This "something" is usually in the feeding. In most cases of the pullets' delay in starting to lay, it is found that animal food is omitted from their dietary. Meat judiciously and methodically given will have the effect of hastening matters. Judgment is, however, required to know just when animal food may be given with beneficial results. As we have already stated, pullets that have come on too quickly must be retarded, and to this end the amount of food given should be limited, and the diet should be low, avoiding soft food and everything of a stimulating nature. A further check to the forward pullets may be given by changing their quarters immediately they appear to be settling down to lay. This will probably have the effect of delaying matters somewhat. It is on light sandy soils where the greatest difficulty is experienced by the pullets coming on too rapidly, since under these conditions birds mature more quickly than they do on heavy clay land. But even in these circumstances by careful feeding much may be done to retard them until the proper time arrives.

The New Address of

"The Illustrated Poultry Record"

IS

TUDOR HOUSE, TUDOR STREET, E.C.

POULTRY INSTRUCTION AND ORGANISATION.

CONDUCTED BY EDWARD BROWN, F.L.S.

POULTRY TEACHING IN SOUTH AFRICA.

FROM the annual reports of Agricultural Education in South Africa we make the following quotations:

GROOTFONTEIN, Cape Colony.

Mr. Arthur Little, lecturer at Grootfontein, Middleburg, C.P., writes as follows:—

On my arrival here on March 14, 1912, the stock of poultry consisted of 31 birds of medium quality—in one house and small run; it was necessary at once to provide better facilities for the teaching of poultry culture. Unfortunately only a very limited amount of capital was available, but with this the nucleus of the poultry plant here has been erected—viz., almost the entire wire fencing necessary, some breeding pen-houses, and some appliances, &c. Nineteen birds of five different breeds and of the best laying strains procurable in South Africa were purchased. I do not advise that birds should be imported. Good ones are to be found in the country, and these and their stock will be improved year by year. It is also my intention to breed only utility birds—i.e., those producing the greatest possible output of eggs and the largest amount and best quality meat. Show birds will have no place on the farm—only those which benefit the poultry-farmer, the general farmer, and the poultry industry of the country. The number at present, with the young stock bred from the 19 purchased, together with the 12 best of the original 31, and 25 the pick of 81 transferred from Roodepoort Stud Farm, reaches a total of 192, housing accommodation for which, owing to lack of funds, perforce consists to a large extent of packing cases. For the same reason it has not yet been possible to stock any ducks, geese, or turkeys. The students, therefore, although they have had theoretical instruction, by means of lectures on these, have not yet been able to gain any practical experience. The same applies to the numerous breeds of fowls, apart from the seven at present stocked.

The only accommodation for incubator work and instruction has consisted of a very unsatisfactory and inadequate room in the farmhouse. Practical demonstrations, operations, post-mortem examinations, &c., for instruction to the students, have been carried on in an old shed. A full course of 60 lectures dealing very fully with the subject has been given during the period from March 14 to December 23, 1912, to both junior and senior students, who, with few exceptions, did well in their examinations; but much yet remains to be provided in the way of buildings, appliances, and stock before the thorough practical instruction necessary can be given, although as far as possible the manual practical work, such as cleaning, feeding, dipping, &c., has been carried out in the poultry-pens already erected by the students during working hours, each day from 6 a.m. to 5 p.m.

In addition to the work at the school, I delivered during the period from March 14, 1912, to March 16, 1913, in the two vacations principally, a number of lectures at different centres to farmers and others;

judged (usually utility, poultry, eggs, table birds, and appliances), and gave practical demonstrations at several agricultural and poultry shows; and also visited a number of poultry-keepers at their request in order to give advice and instruction. For this work there is very urgent need throughout the country; farmers and poultry-keepers are rapidly waking up to the necessity of running their poultry on up-to-date lines, and are realising not only what a valuable asset they are on the farm, but also their own ignorance on the subject. I have noticed this especially during the last nine months, and the demand for my services in this respect has been so urgent that arrangements have now been made to provide an assistant in order that I may be able to cope, as far as possible, with outside work as well as with that at the school. To the duties I have enumerated must be added the answering of inquiries and giving advice by post. The amount of work in this connection is increasing very rapidly; the number of inquiries by mail now reaching me from all over the Union averages between 60 and 70 per week. In addition to this, birds are sent here for post-mortem examination.

POTCHEFSTROOM, Transvaal.

Mr. R. Bourlay, lecturer in poultry husbandry at Potchefstroom School of Agriculture, reports as follows:—

The field covered by this division embraces the Transvaal, also to a certain extent the Orange Free State and certain parts of the Northern Cape Province and Bechuanaland; thus the area to be covered is very considerable, and is more than one official can perform with real efficiency, though it is hoped that with the establishment of a School of Agriculture at Glen, near Bloemfontein, the appointment of a poultry instructor for that institution will considerably reduce the area which has at present to be covered from this centre. The interest taken in poultry-keeping, as emphasised in my previous report, continues to grow. In spite of the fact that instructors in this branch of farming have been appointed at the Middleburg and Elsenburg Schools of Agriculture in the Cape Province, which brings the total within the Union to four, including Cedara, in Natal, the demand for the services of these officials is rapidly increasing. So far as Potchefstroom is concerned, and I gather as regards the other schools also, it is frequently difficult to meet all the demands made. It has to be remembered that the duties of these instructors include giving instruction to the students at the various institutions at which they are stationed, which involves no small amount of time and work, and it is doubtful whether there is any other division whose work embraces such a wide field and yet has so small a staff.

The poultry establishment at this farm consists of fifty fowl runs, all of which are well and strongly erected, and are in good order. The principal breeds kept are Anconas, White Leghorns, Black Leghorns, Brown Leghorns, Minorcas, White Orpingtons, Buff Orpingtons, White Wyandottes, Rhode Island Reds,

Barred Plymouth Rocks, Indian Game, Aylesbury and Indian Runner ducks, and bronze American turkeys. These breeds have been selected as being representative of those most suited to South Africa, and though many other varieties have been kept from time to time on the farm, they have been discarded for some good reason to make room for those which have proved themselves to be of greater economic value. The objects of the establishment are primarily educational as regards students and visitors, and as opportunity offers to carry on suitable experiments, and, secondly, to increase the supply of pure-bred poultry. With the latter object in view, during the past 15 months 1,391 head of poultry, 103 ducks and 59 turkeys, and 384 settings of eggs were distributed, bringing a revenue of £1,043 19s. 6d. One thousand six hundred and nineteen head of young stock were reared during the past breeding season, consisting of 1,467 chicks, 110 ducks, and 42 turkeys. All surplus cockerels which are not sold for stock purposes and eggs which are not required for incubation are sent to the Students' Hostel for consumption.

During the period under review upwards of sixty students have taken practical courses on this division, and to these must be added the short-course students, who received lectures and practical demonstrations three times weekly during the course. As mentioned in my last report, the practical training given to the ordinary students is not long enough to admit of their gaining anything but a superficial knowledge of the work, for, as they are changed every two weeks, this period does not even give them sufficient time to work an incubator through a hatch.

SELECTIONS AND REVIEWS.

Treatment of Goslings.

Mr. J. W. Hurst does well in the *Field* to call attention to the need for economy in feeding goslings, which, in spite of increased demand last Christmas, and from the fact that they are heavy eaters, cannot meet the cost of expensive food:

After the early days of rearing some difference of treatment is required, according as the birds are intended for early killing or are to be run on for the autumn or winter, or for stock purposes. No doubt many farm poultry-keepers have been reluctant to breed these birds in consequence of the decline of the Michaelmas demand, but it should be understood that there is a more recent compensating and increasing demand for goslings in the earlier months. Goslings that are killed off the grass do not need special fattening, provided the feeding has been suitable, and they should not be allowed on the pond; their run must be more limited than in the case of birds that are to be held over for later requirements, but the grazing must be good. It will generally be sufficient, at the end of the fourth week, to feed generously twice a day upon a mixture of barley meal, middlings, and brewer's grains, or Sussex ground oats and middlings. I have not found meat so desirable or essential as some suppose, and a quick-growing strain of cross-bred goslings will generally make sufficient progress on a diet of grass and good meal mixtures, being ready for killing at from two or three months of age.

Greater freedom should be allowed the birds that are to be reserved for September, otherwise their early rearing should follow the same general lines. As soon as they are sufficiently advanced they may be allowed to graze over a wide area until a month before killing, when their liberty must be curtailed. Until then they must be sufficiently fed to maintain a good condition, without fatness, and they may be finished on stubbles, or given a month's course of special feeding. Again, goslings that are to be retained for a still longer period may be run right along with the old birds from the time of feathering, and fed and housed in the same manner. In any case, a long rearing period makes it essential to practise economy in feeding, but this must on no account be understood to imply such an excess of frugality as to cause loss of condition.

Breeding from Yearlings—and Size of Eggs.

The effect of breeding from yearlings upon the size of eggs is greater than is generally supposed, and may yet have more serious effects. A writer in the *Bazaar* calls attention to this question:

Various theories are advanced from time to time to account for the small eggs so frequently laid by the prolific stock at the present day. A favourite idea is that modern breeders are so eager to increase the quantity of eggs that they overlook the size and quality, though it is worthy of note that laying competitions are invariably decided by the value and not the number of the eggs laid, so that the tendency towards striving for more eggs at any cost should be, and unquestionably is, corrected. Recently it was urged that small eggs were due to the modern preference among utility poultry-keepers for small birds, but we do not think that theory is acceptable, because it is an undoubted fact that some small fowls lay large eggs and some large birds lay small ones. The utility poultry-keeper breeds a small class of fowl for the sake of economy, and though, of course, there is a limit beyond which reduction of size would be attended with danger, it by no means follows that utility stock produce smaller eggs than exhibition stock because their bodies are smaller. Indeed, in many cases the very opposite is experienced.

The most reasonable theory, we consider, is that size in eggs has been gradually lost through breeding year after year from young females. It is a fact, as every poultry-keeper can ascertain for himself, that under equal conditions a matured hen in her second or third season will lay larger eggs than a first-season pullet, and being more matured she will produce finer chickens, which in turn will develop into better pullets, with a capacity for laying bigger eggs than birds that have descended, generation after generation, from yearlings. The loss of size in eggs is all the more probable when pullets used for breeding are of a specially prolific character, and we think it is a well-recognised fact that in some strains small eggs have resulted from breeding-errors of that nature. The only way to bring about an improvement is to breed entirely from hens in their second or third seasons, and to select birds that, besides being steady and consistent layers, have distinguished themselves by producing good-sized eggs. It is advisable to sacrifice a few eggs if by doing so one can obtain better size, and avoid producing eggs so small as to be scarcely marketable at ordinary prices.

Oatmeal and Onions.

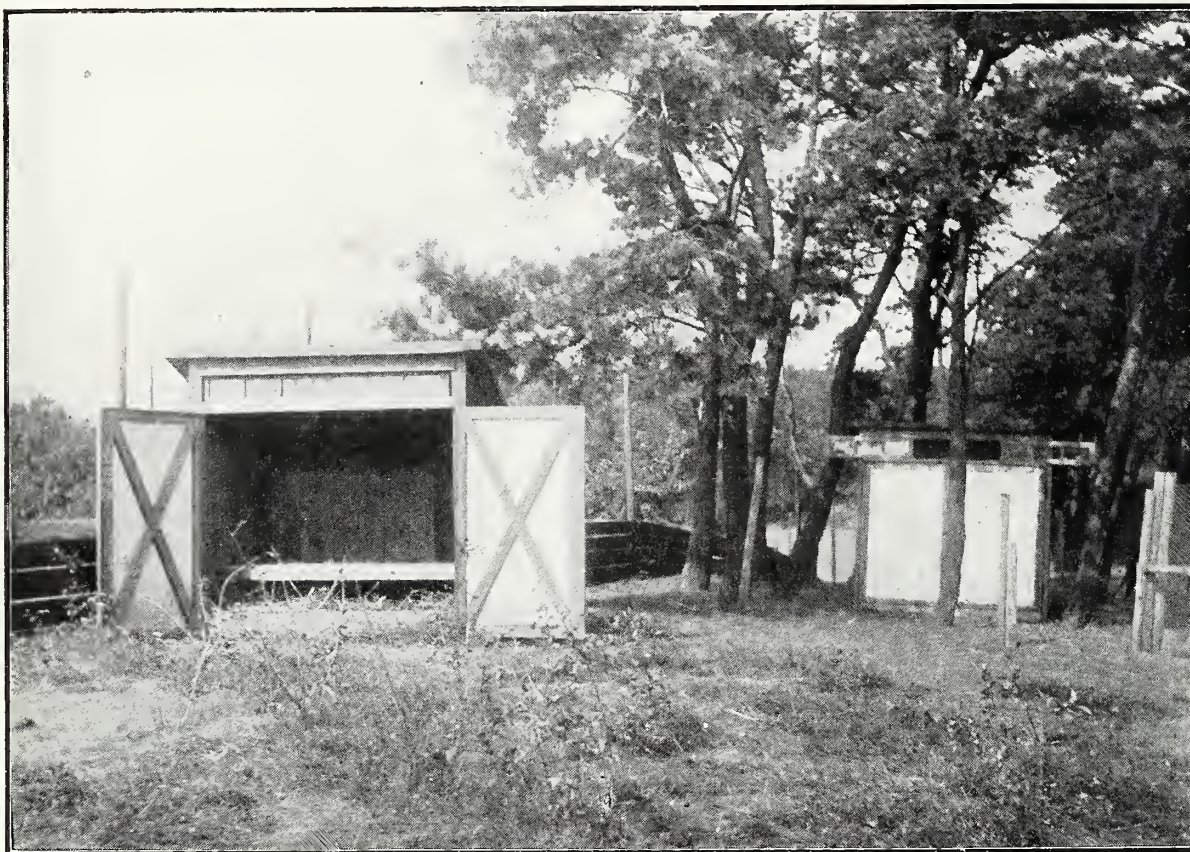
In an interesting account of the poultry plant of Mr. Peter Walker, at Kingask, near Cupar, Fife, the *Dundee Advertiser* brings out that two O's are leading factors in chicken rearing.

The feeding is carried out on scientific principles. In the "meat house" there are built large bins, the bottom of each sloping downwards towards the front where there is a sliding door. All that one has to do in order to obtain a pailful of grain or meal is to place the pail under the bin and pull the sliding door, when the contents of the bin run down into the waiting receptacle. This saves all waste. Our pails filled, we carried the grain to the various runs. Here again there is no wastage. All the grain is supplied by means of a patent feeder. In order to get the grain out the fowls have to peck at a gauze-covered box, in which corn is to be seen. The pecking releases a small supply of grain from a receptacle at the top, and it no

Fighting the Gape Worm.

We do not appear to have heard quite as much of gapes lately as was at one time the case. Still, there is quite enough of the trouble. Immediate treatment is not enough. Land so infested must be treated. In the *Farmer and Stockbreeder* Mr. G. A. Palmer makes the following recommendations:

The best applications to put on gape-infested land are lime, soot, and salt. As all these improve most pastures the whole return will come back in grass, and the cleansing of the land for the chicks will cost nothing. Where gapes is shown this season I should certainly advise three tons of lime per acre in autumn, soot 20 bushels per acre in March, and salt 3 cwt. per acre in April. This will, I believe, effectually prevent gape-worm on the rearing ground. Other aids to prevention are having coops with wooden bottoms, and keeping the floors covered with sand and quicklime. Again, it is impossible to make



[Copyright.]

AN EXCELLENT FORM OF TURKEY HOUSE IN USE ON A LARGE GERMAN FARM.

sooner falls than it is picked up. There is nothing lost. The sparrows do not share in the feed.

The sitting hens, for Mr. Walker utilises his broody hens for the purposes of natural incubation, also received their share of the morning feed. Each is housed in a separate and commodious pen, and the grain and water are supplied in small troughs within. The hen itself is never disturbed in any way. Then we attended to the chickens, which run freely on a closely cropped grass field, and it was noticeable that my host placed his faith in the simple feed of oatmeal and onions for his young birds. Some of them are already well grown, having been hatched in February.

the chicks breathe enough lime to kill the parasite without affecting the birds adversely in other ways. This is the best for those now hatching turkeys and chicks where the older broods have the gapes. Clear out a shed such as a cart hovel or any other shed with an earth floor. Soak the floor well with a coal tar disinfectant. Cover the floor with dry sand or light loam to the depth of two inches. Sand dug from below the surface is best. Put one part of slaked lime to nine of sand. Then put the coops upon that, and pen them in by wire netting until six weeks old. After that, if they go out on to grass they will be old enough to withstand the disease. For green food they can have boiled

cabbage and clover cut from the first year's seeds in an arable field. That, I think, would be perfectly safe. Of course, the floor must be lightly swept and the droppings removed, the whole raked over deeply, and if necessary more sand spread on. I do not believe that it is in the power of any medicine to save every bird that is attacked. One sensible line of treatment is to give the chicks feed medicated with minute doses of camphor, turpentine and carbolic acid from the first.

Mr. S. C. Sharpe on Brown Sussex Fowls.

In the annual volume of the British Dairy Farmers' Association, Mr. S. C. Sharpe thus speaks of the breed indigenous to the county in which he lives and works :

We have a breed excellent for this purpose, and not yet so well known out of Sussex, called the Brown Sussex. They are huge birds, and of excellent colour, being just the class of fowl for breeding early spring chickens. They are hardy, and the pullets lay at an early age. The cockerels can be used for mating with several other breeds, and by doing so it often improves the size and stamina of the progeny. If mated with hens or pullets of their own strain they throw chickens of quick growth and fine hardy birds, which can often be put on the market at eleven or twelve weeks old. This is another point which I am anxious to make quite clear with reference to rearing spring chickens; if we want to make this part of poultry-keeping profitable, we must endeavour to get our chickens off hand at the earliest possible moment, just as the Buckinghamshire "duckers" do with their Aylesbury ducklings, and with the right kind of fowl it is quite possible to turn them out at the time I have mentioned, provided the feeding and general management is correct; that part of the work I will deal with later. Another good cross for rearing chickens is the Sussex-Faverolles. I like to use Sussex pullets with Faverolles cockerels or cocks; and if the birds on both sides are of good, heavy stamp, the chickens will be useful and quick growers. It is very important that in mating for chicken breeding both pullets and cockerels should be of the largest possible type.

All small, badly-grown pullets or hens should be weeded out, for they will only produce chickens which will cost more to produce than they will realise on the markets; besides, they spoil the appearance of a batch. I should like to point out here that in mating, or in buying birds for mating, see that they are long in the back. A fowl with a long back means a fowl with a correspondingly long breast, and this is what we must aim for in breeding chickens for market. It was the length of back which made the old Dorking such a useful breed for table, and every bird or breed with a long back will throw good useful chickens. We hear a great deal about Game crosses, and for certain purposes they are splendid; but when it comes to breeding chickens for fattening, the Game cross is not a suitable fowl.

Hen Hatching.

Evidently the hen as a mother is coming to her own again, and quite a number of large breeders are using the natural method to a greater

extent. One of these is Mr. T. W. Toovey, who, writing in *Eggs*, says :

The hatching shed is 160 feet long divided into five compartments, each 32 feet long by 16 feet wide; four are used for hatching, one for hens that have finished hatching or have failed to take the nest. In each of the compartments there are fifty nests, in three tiers along the back wall. I should have said the shed is 8 feet high at back, and sloping to 5 feet in the front, which is covered with netting, just the opposite in shape to a modern intensive house.

The doors being in line, when propped open the men can work as in a corridor. All round the three sides not occupied by the nests staples are driven into the wood, about one foot from the ground level; to these the hens when removed from the nests are attached by running nooses in string. Each hen's tie is about 1 foot 6 inches long; there is just about room to take the whole fifty hens off at once. The floor of the sheds is deeply covered in ashes.

So the scheme is, nests along the back, and tethers for the hens round the sides and front; in the centre will be found a drum of Izal powder and a nursery fireless brooder on legs. The nest boxes are of the ordinary kind; they are built in sets of five. All have wooden floors. They are 15 to 16 inches square, and 18 inches high. The whole of the front is a shutter which leaves a space of two inches along the top for ventilation. The nests are formed of hay, no earth or turfs are used, and moisture is not added except in very hot dry weather.

By practice the men become very expert in taking the hens off, moving two at a time, one with each hand. While the hens are off, the nests and eggs are examined. If an egg is broken all the other eggs in the nest are washed in warm water, a small spirit lamp stove and kettle being available.

With 200 hens down, it takes just about two hours per day for two men to do what is needful. After much experimenting we find seventeen eggs per hen to be the most profitable number for a nest. At one time we put 20 with some hens; this is all right, but taking the average seventeen are best. So it will be seen the hatchery has a capacity of 3,400 eggs; in the busy time we actually have about 3,000 down all the time; 75 per cent. of the eggs laid down yield chickens, a large proportion of which go away of course as day-olds.

What Switzerland Lacks.

Visitors to the holiday ground of Europe have often remarked on the remarkable absence of fowls, few of which are seen. Considering the enterprise and industry of the Swiss, and the enormous consumption of eggs and poultry to meet the demands of the great army of visitors, this is surprising. Italy and France are the chief sources of supply, although Sussex fowls have been imported. An American consular report says :

Search as one will, it is not likely that a hen, fat or lean, young or old, will be found in the local markets. The only chickens prepared for the market are the young cocks, the surplus of which are killed. The pullets and hens are kept for brood purposes. If a hen, through age of service, should cease to be prolific, she too might be killed, after being fattened and offered

for sale; but no one actually thinks of raising chickens for profit, and no one knows anything about scientific or profitable methods of raising chickens. Such a practice as killing hens after their first season of laying is unknown. In fact, so little is known about chicken-raising that it is generally believed hens improve with age in their laying proclivities, hence they are kept until they become as familiar and endeared to the family as the horses and cows. Next to nothing is known of raising chickens by the incubator and brooder methods. Upon inquiry it was ascertained that there is only one incubator in Basel, and that is a baby incubator!

Pure Versus Cross-breds for Layers.

Probably the question will never be decided whether pure or cross-bred fowls are preferable for practical purposes. Much can be said on both sides. Here is what "Hetherdale," writing in *Feathered Life*, has to say for the non-pure:

I always think that housing and feeding play a big part in egg production. Many times have I seen mongrel pullets, just ordinary cross-breeds which did not resemble any particular variety, turn out more eggs during winter than the best laying strains. These birds have been well fed, have been given late suppers, and the number of rich-coloured brown eggs they have produced has been astounding, and as these pullets cost perhaps half the price of pure breeds at the beginning they have done wonderfully well, and I do believe it is because of their exceptional laying properties that so many cross-bred fowls are to be found on farms to-day. It is not that farmers are slow, or that they have never seen pure breeds. They have tried them, but it is because they find cross-breeds are quite as good, and perhaps better than most pure varieties.

The small breeder with about one dozen hens can always manage to put up good egg records if he attends to his birds properly. I never consider these wonderful reports of real value. I know it is frequently done, but it is altogether different with a large poultry-farmer. He cannot possibly expect to get the same results as the small man no matter how good the laying strains obtained, and this is one of the difficulties connected with commercial utility poultry-farming of the present day, and must always be a great hindrance to further extensions.

Milk, Mustard and Maggots.

Linking poultry with ordinary farm operations is the line of greater profit. "Somerset Farmer," writing in *Farm and Home*, calls attention to points of management which are of interest as a result of practical experience, deserving of careful consideration:

An excellent plan is to draw the houses on to the fields where manure is being carted, as besides getting a lot of food from the manure in the shape of maggots, &c., they scratch the manure about and work a lot in, besides giving themselves plenty of exercise. A good plan in winter is to stand the houses near any haystacks that are in use, and throw the corn amongst the odd litter that generally abounds there. We feed soft food in morning and corn evening, and change the diet frequently. The only spice we use is a little poultry mustard, for I do not believe in condiments for any farm stock, and, on the whole, we get a very

fair lot of winter eggs; in fact, a good many more than most of our neighbours. One of the best foods I ever found for keeping up a winter supply of eggs was to mix the morning mash up with separated milk. Taking it on the whole, I think hens pay a fair profit on the capital invested, but to make them pay there is a lot of detail to be gone into, and, as usual with farm work, seven days a week and one hour's neglect often means two or three months' work gone for nothing. I have kept ducks, turkeys, and geese, and if you have a suitable place ducks pay well for rearing and fattening; but it is quite a business in itself, and on an ordinary farm one branch of poultry-farming is quite enough to attend to. I am of opinion, after trying it all, that hens pay better than any other branch of poultry, and there is no question that young chickens, if placed about the fields in small houses with plenty of food, and of the right sort, pay as well as most things. Where you can hatch chickens in January and February to sell in April and May at 5s. to 7s. per couple of young poults, there is a fair margin of profit, and a free range in the fields on fresh ground helps them enormously. Pullets, too, that are run in the fields all the summer are in excellent trim for winter egg-production, and if bred right want very little forcing in October to lay all the winter.

Pessimism in Poultry.

Exaggeration is bad in both ways, up and down. Yet without imagination there could be no progress. Nothing, however, is gained by hiding the facts as they are, whether favourable or the reverse. *Farm Poultry* has been rebuking the pessimists thus:

There has never been a time when so many agencies were apparently working for the advancement of poultry culture, yet it is not advancing in proportion to the efforts put forth. What is the reason?

Simply this, various "official" efforts to "do something" for poultry culture, and, specifically, for "utility" poultry culture, are doing (perhaps) a little good in the ways intended, and no end of harm in ways the projectors probably failed to anticipate, because they were not familiar with all phases of the industry.

The white diarrhoea investigations, as they have been made and exploited, have done incalculable harm by creating false impressions of the extent and seriousness of the trouble, and a largely baseless fear of it which curtailed both production and the trade in stock and eggs. We cannot tell yet how far the effects of the Storrs Station's statement (which we consider unwarranted) will go, but we fear that it will prevent the hatch of a greater number of chickens with no taint of the disease, in the remainder of this season and next, than white diarrhoea will destroy in the same period.

The laying competitions, as conducted and exploited, have had on a much larger scale precisely the same effect that the exploitation of heavy laying strains has had at various times in the past—business is temporarily brisk for those few who are getting the advertising, but is damaged for those doing business in the regular way.

The search for "champion" layers by several agricultural college departments has had a sensational finish at Corvallis, Oregon. The kind of publicity given to this very doubtful record, and the use made

of it to create a feeling against pure bred stock, has undoubtedly made many beginners shy of buying through the regular channels, and the masses must buy through the regular channels if they buy at all.

SOUDANESE FOWLS.

THERE are many areas which offer opportunities for study of the native breeds of poultry, and it may be that these will yield races totally different from anything we now possess. In this way the forces of natural evolution will be further illustrated. A writer in the *Bazaar* describes what he terms Dervish Fowls as follows:

These Soudanese fowls are said to have certain peculiarities more or less consequent on the conditions under which they have existed, and are generally understood to be descendants of birds left behind by the Dervishes when they hastily evacuated their position in that country. One of these peculiarities consists in a length of leg apparently out of proportion to the body, said to be caused by constantly walking in the sand, and to the same reason their peculiar gait and rapid movements are attributed, whilst their extraordinary foraging propensities are put down to the fact that to a very great extent many of them have had to obtain their own livelihood in a semi-wild state.

How far these stories are correct we are not in a position to say. Anyhow, an importation of them has been made, and from the general description given we gather that they have some claims to consideration as a general-purpose fowl, though of course it has yet to be proved what they will shape like in an English poultry-yard. Meanwhile a short description of them may not be out of place. The importation consisted of two consignments—one from the neighbourhood of Khartoum and the other from Kordofan. The former are described as follow: Cock, black in ground colour with very bright blue and green sheen and golden feathers freely interspersed in the hackle and saddle. Wings carried peculiarly low down with white outside feathers forming a white bar along each side of the bird. General carriage that of an extremely pugilistic type; legs very long, body plump and round with full breast. Hen, black, with an attractive gold powdering sprinkled over it; no ear lobes or wattles, small black crests, long legs, and quick and active in appearance and movements. In both sexes comb rose and legs black, those of the cock being set very wide apart and stout in formation, the hen's long and thin.

The Kordofan birds are also black in their ground colour, interspersed with red, gold and blue feathers, the females being of a more greyish tendency than the male bird. Combs single, legs pearl-grey, and extraordinarily long in comparison to the size of the body, which is small, plump, and well rounded.

BOOKS AND PUBLICATIONS RECEIVED.

MONTHLY BULLETIN OF ECONOMIC AND SOCIAL INTELLIGENCE. Rome: International Institute of Agriculture. Vol. XL., No. 4, April, 1914.

MONTHLY BULLETIN OF AGRICULTURAL INTELLIGENCE AND PLANT DISEASES. Rome: International Institute of Agriculture. Year V., No. 4, April, 1914.

RAPPORTS ET COMMUNICATIONS. Brussels: Office Rural of the Ministère d'Agriculture. No. 9, 1914. 307pp.

Contains an article on "Hygiène et Maladies de la Volaille," by M. Lienaux, dealing with methods of management and feeding, and also treatment of various diseases.

STUDIES IN THE PHYSIOLOGY OF REPRODUCTION IN THE DOMESTIC FOWL. No. VI. Double- and Triple-yolked Eggs. By Maynie R. Curtis. Reprinted from the Biological Bulletin, February, 1914. 29pp., illustrated.

This valuable paper can only now be acknowledged, as it requires careful study before its observations can be summarised.

THE TABLE POULTRY CLUB YEAR-BOOK, 1914. Edited by Ernest C. W. Widdows. Aylesbury: G. T. De Fraigne and Co., Ltd. 60pp., illustrated. 1s.

Although acknowledgment is somewhat belated this useful handbook makes a serviceable beginning of what may be hoped to prove a long series; containing much that concerns specially the poultry side of the industry.

TABLES FOR CALCULATING CO-EFFICIENTS OF INBREEDING. By Raymond Pearl and John Rice Miner. Bulletin No. 218, 1913. 12pp.

The object of this publication is to submit a method of measuring the degree of inbreeding, and to show the maximum possible number of different ancestors, which it is believed may be of practical value to the stock-breeder.

AMERICAN POULTRY JOURNAL YEAR-BOOK, 1914. Chicago, Ill.: 542, South Dearborn Street. 408pp., with coloured plates; paper 2s., cloth 4s.

A book packed with valuable articles dealing with almost every aspect of the industry, in addition to general

features found in such publications. Among those specially noticeable are the Poultryman's Encyclopædia and Calendar, and the descriptions and illustrations of the fowl and its organs. Reports of laying competitions, and a digest of the year's doings, together with names of prize-winners at the more important shows, complete what is a most useful handbook for constant reference.

THE BRITISH YEAR BOOK OF AGRICULTURE, 1913-14. Vinton and Company. 542pp. Price 5s. net.

Owing to unavoidable circumstances the publication of this volume for 1913-14 has been delayed, but it is now ready for the public. This book is the *valde mecum* of agriculturists, and, as usual, it teems with information, including the latest statistics in all branches of the art. It is divided into nine parts—namely, 1, Societies and Institutions; 2, County Information; 3, Education and Research; 4, Diseases and the Animal Acts; 5, Importation and Exportation of Animals; 6, Prices and Markets; 7, Statistical, Legal and General Information; 8, Agriculture in the Colonies; and, 9, The Agricultural Who's Who.

POULTRY NOTES. Bulletin No. 216 of the Maine Agricultural Experiment Station, Orono, Maine, 1913. 18pp., illustrated.

This contains several notes of very great value to poultry-keepers everywhere, each of which deserves quotation at length. These are "The Value and Preservation of Hen Manure," "The New Maine Station Manure Shed," "A Crematory for Dead Poultry," "An Improved Range Feed Trough," "Natural Enemies of Poultry," "Green Food for Poultry," and "How the White of the Egg is made." In the last-named a new observation is recorded—namely, that the greater bulk of the white or albuminous portion of an egg is added after the shell membrane is formed.

WINTER EGGS. By E. O. Wattieu. London: Laughton and Co., Ltd. 224pp., illustrated. 1s. net.

Considering the large amount of attention now given to intensive methods there is call for a handbook giving in

detail the methods adopted, although these change almost from day to day. Not long ago "bird-cage" methods were in the ascendant; now huge range houses are advocated. That, however, might be expected from the fact that everything is still in the experimental stage. This little work, whilst frankly that of a promoter affected by *intensifitis*, states the case fairly, and contains a large amount of useful information generally applicable. It should, however, be studied in the light of the Preface, by Principal J. R. Ainsworth-Davis, who clearly records the view that the system described "is now on its trial," and that the book can be commended to "the numerous poultry-keepers who desire to test the intensive system."

METHODS OF CHICK-FEEDING. By Clara Nixon (Bulletin No. 317), of the New York Agricultural Experiment Station, Cornell University, Ithaca. 44pp., illustrated.

In this is given second record of experiments conducted at Cornell as to the feeding of chickens, which were of an exhaustive nature, in which comparative tests were made. Various systems of feeding were tried, from which it was found that the mortality was greatest with the birds fed on wet mash prepared with granulated milk and beef scrap; that the flock having dry mash, cracked grain, and beef scrap cost least per pound weight, per pound grain, and per chick in twelve weeks; that the flock having skim-milk, grain, and beef scrap gave the largest number of market-

able chicks and the heaviest live weight of chicks; that all flocks fed on cracked grain and ground food gave better results than those without ground food; and that the least satisfactory results were obtained by the use of ground food and beef scrap without cracked grain.

ON THE ABILITY OF CHICKENS TO DIGEST SMALL PIECES OF ALUMINIUM. By Maynie R. Curtis. No. 59 of Papers from the Maine Agricultural Experiment Station, Orono, Maine, 1913. 5 pp., illustrated.

As a result of several cases of peritonitis at the Station due to puncture of the gizzard walls by sharp pieces of metal, an investigation has been conducted as to the effect of and upon pieces of aluminium leg bands swallowed by fowls, picked up from the ground, and which evidently had not proved injurious. In one case a bird killed had fourteen such pieces in its gizzard, which were considerably worn down, evidently by a combination of the mechanical grinding of the gizzard and the action of the hydrochloric acid of the gastric juice. Other birds killed confirmed this experience, which, in spite of the doubts thrown from time to time upon the action of grit and hard substances in the gizzard, gives additional proof of the value of such material. It is evident that aluminium has no injurious effect, such as would be the case with some metals from which poisonous acids would be obtained, such as zinc.

CURRENT POULTRY LITERATURE.

(Mention is here made of special articles appearing in home and foreign productions dealing with poultry keeping in its various branches.)

THE LADIES' FIELD. London: Southampton Street, W.C.
Poultry-Keeping for Women, June 6, 1914.

BAZAAR, EXCHANGE AND MART. London: Drury Lane, W.C.

Marketing Table Poultry, by R., May 16, 1914.

EGGS. Poole: R. Meech.

Fireless Brooding, by Mrs. Oswald Cottrell, June 3, 1914.

THE FIELD. London: Bream's Buildings, E.C.

The Rearing of Goslings, by J. W. Hurst, May 16, 1914.

LIVERPOOL POST. Liverpool.

The Law and Cock Crowing, by A Legal Correspondent, May 21, 1914.

FARM, FIELD AND FIRESIDE. London: 3, Wellington Street, W.C.

The Rearing of Ducklings, June 5, 1914.

JOURNAL OF DEPARTMENT OF AGRICULTURE FOR IRELAND. Dublin: E. Ponsonby, Ltd.

Winter Egg Records, 1913-1914, April, 1914.

THE AGRICULTURAL JOURNAL OF SOUTH AFRICA. Pretoria, Transvaal.

Effect of Altitude on Laying Qualities, May, 1914.

JOURNAL OF THE BRITISH DAIRY FARMERS' ASSOCIATION. London: Russell Square, W.C.

Early Spring Chickens, by S. C. Sharpe, Vol. 1914.

NEW ZEALAND POULTRY JOURNAL. Christchurch: J. B. Merrett.

Report of Fourth Annual Poultry Conference, April 20, 1914.

JOURNAL OF THE BOARD OF AGRICULTURE. London: 4, Whitehall Place, S.W.

Chicken Rearing Demonstration at Morden Hall, June, 1914.

THE POULTRY WORLD. London: 154, Fleet Street, E.C.
Pullets *versus* Hens as Breeders, by Various, May 22, 1914.

Gapes in Chickens, by Will Hooley, June 12, 1914.

AGRICULTURAL GAZETTE. London: Vinton and Co., Ltd.
Various Opinions on Poultry Farming, by "Old-time Farmer," June 1, 1914.

Chickens Feathering, by L. C. Davies, June 15, 1914.

THE SMALLHOLDER. London: Henrietta Street, W.C.

Money in the Guinea Fowl, by E. T. Brown, May 30, 1914, *illustrated*.

Shelters and Perching, June 6, 1914.

Poultry Pests, June 13, 1914.

FARMER AND STOCKBREEDER. London: Essex Street, W.C.
Gapes in Poultry, by G. A. Palmer, May 18, 1914.

Three Months Old Chicks, by Heatherlea, May 25, 1914.

Successful Chicken Rearing, by G. A. Palmer, June 1, 1914.

POULTRY. London: 10, Essex Street, W.C.

Light and Colour in Connection with Production, May 22, 1914, *illustrated*.

Carpentry for the Poultry-Keeper, by A. C. North, June 12, 1914, *illustrated*.

Feet Picking—a New Complaint, by Various, June 19, 1914.

THE FEATHERED WORLD. London: 9, Arundel Street, W.C.

Recession to Mediocrity, by Edward Brown, F.L.S., May 22, 1914.

Milk for Chickens, by "Rightabout," May 29, 1914, *et seq.*

Weak-Shelled Eggs, by W. Berry, June 12, 1914.

FEATHERED LIFE. London: 5, Fetter Lane, E.C.

Rearing Ducklings for the Table, by E. C. Davies, June 3, 1914.

Satisfactory Egg Production, by "Heatherdale," June 10, 1914.

A Study of Fowl Language, June 10, 1914.

Acquired Fecundity, by Oscar Smart, June 17, 1914.

THE TIMES. London: Printing House Square, E.C.

Egg and Poultry Production in the United Kingdom, June 8, 1914.

Our Egg Requirements, June 8, 1914.

Preservation of Eggs, June 8, 1914.

Egg Substitutes, June 8, 1914.

The Poultry Trade, June 8, 1914.

Leadenhall Market, June 8, 1914.

The Poulterers' Company, June 8, 1914.

IMPORTS OF EGGS AND POULTRY.

PUBLISHED records of imports for May and the first five months of the current year show a slight increase in the volume of imports of eggs and poultry in both of these directions as compared with the corresponding periods of 1913, thus maintaining the great advance over 1912 which took place last year. The following are the figures :

EGGS IMPORTED, 1913 AND 1914.

Quantities in Great Hundreds.

May. Five Months.

	1913.	1914.	1913.	1914.
Russia.....	1,012,385	1,086,843	2,593,391	2,362,868
Denmark	348,175	271,625	1,548,423	1,232,051
Germany	11,265	8,430	260,481	393,540
Netherlands	133,088	149,873	510,146	650,677
France	112,806	94,076	391,315	369,448
Italy.....	69,669	88,968	451,483	624,862
Austria - Hungary	22,200	62,488	619,418	825,010
Other Countries...	83,165	88,845	1,284,317	1,297,041
Total.....	1,792,753	1,851,128	7,658,982	7,755,497

VALUES (in £'s).

Russia	354,725	399,528	983,920	931,303
Denmark	152,179	123,094	802,754	66,421

VALUES (in £'s).

Germany	4,461	3,451	103,445	171,434
Netherlands	57,547	67,829	246,422	311,443
France	47,971	43,560	177,423	187,464
Italy	29,125	38,480	217,680	308,086
Austria - Hungary	8,722	19,873	259,026	344,392
Other Countries...	31,089	32,459	449,184	470,012

Total..... 685,819 ... 728,274 ... 3,242,854 ... 3,387,555

In respect to volume of supplies in May Russia shows a slight increase, as do the Netherlands and other countries, whilst Italy and Austria-Hungary, the last-named especially, recorded large increases.

There has yet been no check to rise in average values, which have again gone up, with two exceptions. The following are averages per 120 :

	May.	1914.	1913.	Five Months.
	1913.	1914.	1913.	1914.
Russia	s. d. 7 0	s. d. 7 4	s. d. 7 7	s. d. 7 10
Denmark	8 8	9 0	10 4	10 9
Germany	7 11	8 2	8 2	8 8
Netherlands	8 7	9 0	9 7	9 6
France	8 6	9 3	9 0	10 1
Italy	8 4	8 7	9 7	9 10
Austria-Hungary	7 10	6 4	8 4	8 4
Other Countries	7 5	7 3	6 11	7 3
Total	7 7	7 10	8 5	8 8

PRICES OF EGGS AND POULTRY.

From "Return of Market Prices" issued by Boards of Agriculture for England and Scotland.

EGGS—HOME PRODUCE.

WEEK ENDING

	May 20.	May 27.	June 3.	June 10.
	per doz.	per doz.	per doz.	per doz.
London	11½ to 1/0	11½ to 1/0½	11½ to 1/0½	1/0 to 1/1
Bristol	11	11	11½	11½
Carlisle	11	11	11½	11½
Denbigh	1/0 to 1/1	1/1 to 1/0	1/0 to 1/1	1/0 to 1/1
Derby	1/0½ to 1/1	1/0½ to 1/1	1/1 to 1/0	1/0 to 1/1
Dorchester	1/0¾	1/1½	1/0	1/0¾
Hull	1/0½	1/0½	1/1	1/0
Ipswich	1/0¼ to 1/0	1/0¼ to 1/0	1/0¼ to 1/0	1/0½ to 1/0
Lincoln	1/0½	1/1	1/1	1/1
Newport (M)	1/0½	1/1	1/1	1/1
Norwich	9½	9½	1/0	1/0
Penzance	9 to 1/0	8½	9½ to 1/0	9½ to 1/0
Ruthin	9 to 9½	1/0	1/0 to 1/1	1/0 to 1/1
Shrewsbury	1/0¼ to 1/1	1/0¼	1/1 to 1/0	1/1 to 1/0
Wolverh'pton	1/0 to 1/1	1/1 to 1/0	1/0 to 1/1	1/0 to 1/1
York	1/1	1/0	1/0	1/1
Glasgow	1/0 to 1/0	1/1 to 1/1	1/1 to 1/1	1/1 to 1/1
	per 120.	per 120.	per 120.	per 120.
Irish (L'don)	8/6 to 9/0	8/6 to 9/0	8/6 to 9/0	9/0 to 9/6

EGGS—FOREIGN (London).

WEEK ENDING

	May 20.	May 27.	June 3.	June 10.
	per 120.	per 120.	per 120.	per 120.
French	8/6 to 10/0	8/6 to 10/0	8/6 to 10/0	9/0 to 10/6
Danish	8/6 to 10/3	8/6 to 10/0	8/6 to 10/0	9/6 to 10/9
Russian	7/0 to 8/0	7/0 to 8/0	7/0 to 8/0	7/0 to 8/3
Austrian	6/9 to 9/0	6/9 to 7/9	6/9 to 7/9	7/0 to 8/6

POULTRY—FOWLS.

WEEK ENDING

	May 20.	May 27.	June 3.	June 10.
London	4/0 to 5/6	4/0 to 5/0	3/0 to 4/6	3/0 to 4/6
Birmingham	3/0 to 3/9	3/0 to 3/9	3/0 to 3/9	3/0 to 3/9
Bristol	3/0 to 3/6	3/0 to 3/6	3/0 to 3/6	3/0 to 3/6
Derby	2/10 to 3/8	2/8 to 3/6	2/8 to 3/6	2/9 to 3/7
Hereford	3/0 to 3/6	3/3 to 3/9	3/3 to 3/9	2/9 to 3/0
Ipswich	3/3 to 3/9	3/3 to 3/9	3/3 to 3/9	3/3 to 3/9
Lincoln	2/6 to 3/6	2/6 to 3/6	2/6 to 3/6	2/6 to 3/6
Newport (M)	3/3 to 3/9	3/3 to 3/9	3/3 to 4/0	3/3 to 4/0
Norwich	2/6 to 3/2	2/6 to 3/5	2/6 to 3/6	2/9 to 3/6
Penzance	3/6 to 4/0	2/9 to 3/3	2/9 to 3/3	2/9 to 3/3
Shrewsbury	3/0 to 3/6	2/9 to 3/0	2/9 to 3/6	2/9 to 3/6
York	3/0 to 3/9	3/0 to 3/9	3/0 to 3/6	3/0 to 3/6

DUCKS.

WEEK ENDING

	May 20.	May 27.	June 3.	June 10.
London	3/6 to 5/6	3/0 to 4/6	2/9 to 4/6	2/6 to 4/0
Birmingham	3/0 to 3/9	3/3 to 3/9	3/6 to 4/0	3/6 to 4/0
Bristol	3/0 to 4/0	3/0 to 4/0	3/0 to 4/0	3/0 to 4/0

REPORTS AS TO LONDON MARKETS WERE AS FOLLOWS

WEEK ENDING

	May 20.	May 27.	June 3.	June 10.
	each	each	each	each
Sur'y Chicks	4/6 to 6/6	3/6 to 6/0	3/6 to 6/0	3/6 to 6/0
Fatted Irish	4/0 to 5/0	3/6 to 4/6	3/0 to 4/0	3/0 to 4/0
Irish	2/9 to 3/3	1/9 to 2/6	1/9 to 3/6	1/9 to 3/3
Lincolnshire	3/0 to 3/9	2/0 to 3/9	1/9 to 4/0	1/9 to 3/9
Ducklings	5/0 to 7/6	4/6 to 7/6	3/0 to 6/6	3/0 to 6/6
	per lb.	per lb.	per lb.	per lb.
Russians	7 to 11	7 to 11	7 to 11	7 to 11

The only case during May in which is a heavy drop is Austria-Hungary. All others save one show a moderate and fairly equal advance.

So far as Poultry are concerned there was a very big advance in quantities during May, which makes the total for five months greater than the corresponding period of 1913. The figures are :

DEAD POULTRY IMPORTED.					
Quantities (in hundredweights).					
	May.		Five Months.		
	1913.	1914.	1913.	1914.	
Russia	162	5,467	79,340	111,116	
France	618	426	5,937	5,635	
Austria-Hungary ...	—	—	8,775	5,825	
U.S. of America ...	1,960	9,496	54,172	30,704	
Other Countries ...	760	22,846	18,695	34,448	
Total.....	3,530	38,228	166,919	185,728	
Value (in £'s).					
Russia	464	15,893	219,380	345,562	
France.....	3,184	2,610	25,926	18,875	
Austria-Hungary ...	—	—	1,202	21,353	
U.S. of America	6,869	37,156	211,427	120,499	
Other Countries.....	3,328	68,951	63,016	110,643	
Total.....	13,845	124,610	547,951	616,932	

The increase on the five months is from Russia and other countries, the latter probably Chinese. Although American supplies were much larger in May the decline on the whole period is very heavy. As recorded for April, there is again a big drop in average values as compared with 1913—namely, 1913, 79s. 2d. per cwt.; 1914, 65s. 2d. per cwt.; doubtless due to the larger volume of inferior grades, for the general tendency has been upward.

The exports recorded are :

EXPORTS IN DEAD POULTRY					
Quantities (in hundredweights).					
	May.		Five Months.		
	1913.	1914.	1913.	1914.	
British and Irish	78	105	954	767	
Foreign	1,329	4,534	6,637	12,422	
Total	1,407	4,639	7,591	13,189	
VALUES (in £'s)					
British and Irish	430	509	4,558	3,774	
Foreign	6,637	12,422	31,456	59,498	
Total	7,067	12,931	36,014	63,272	

THE POULTERS' COMPANY.

MARKETS IN POULTRY AND LEADENHALL.

THE Craft of Poulterers—the forerunner of the Company which now stands thirty-fourth in the order of precedence—is included in the Brewers' list of 1422. The street named "Poultry" still indicates the site of their ancient market. It is recorded that in 1345 complaint was made to the City authorities that "folks bringing poultry to the City have sold their poultry in lanes, in the hostels of their hosts, and elsewhere in secret, to the great loss and grievance of the citizens." It was accordingly ordained that the poultry should be brought to the Leaden Hall and there sold and nowhere else. This ordinance, however, applied only to poultry and its vendors coming in from the country; for the citizens proper, whether vendors or breeders of poultry, had, and had long had, their market in the Poultry—other places in the neighbourhood being subsequently assigned to them; and for this reason the same ordinance prescribed that the citizens should not go to Leaden Hall but should sell their property at the

stalls—that is, in the Poultry—"as of old they were wont to do." In other words, the City poulterers might buy poultry at Leaden Hall, but might not sell there nor anywhere except "at the stalls"; the country poulterers, on the other hand, might sell their poultry only at Leaden Hall, and might not hawk it in any part of the City nor even sell it "at the stalls." Leadenhall Market is still, of course, the chief poultry market of London.

Election of Officers in Lent.

The Craft of the Poulterers is thus manifestly a very ancient one, and must have been a very important one in the days when men refrained from meat throughout Lent and on all other fast days. A surviving indication of this is possibly to be found in the fact that the Master and Wardens of the Poulterers' Company are elected, not as in the case of other Livery Companies on a fixed annual date, but on Ash Wednesday, the first day of the longest fast in the year. The first charter of the Company was granted by Henry VII. in 1504. It was renewed by Elizabeth, confirmed by Charles II. and James II., and finally settled by William and Mary in 1692. By the latter instrument "All and singular persons using the trade of meere Poulterers, or selling poultry wares, coney butter and eggs within the City of London and Libertys thereof or within seven miles of the same City" were constituted "one body Corporate and Politick in Deed and name, by the name of Master, Wardens and Assistants of Poulterers, London."

Prices Fixed.

The powers of supervision and control granted or confirmed by this charter were those usual at the time. Even before this time these powers would seem to have been exercised in the interests of monopoly, for in 1672 it was found or alleged that the Poulterers of London had so greatly enhanced the value of poultry that the Lord Mayor and Aldermen found it necessary to ascertain the prices to be charged for the various birds. It is interesting to note the prices then fixed, which were as follows:—Best Goose 1s., Best Capon 1s., Second Sort 10d., Best Hen 7d., Best Chicken 3d., Inferior Sort 1½d., Best Woodcock 5d., Green Plover 3d., Pigeons per dozen 1s., Rabbits 3d., Best Eggs five for 1d., Best Butter 3d.

Before the Great Fire the Company is believed to have had a hall in Leadenhall Market, but it has since had no hall, and its business is now transacted at the Guildhall. It is no longer directly concerned with the trade in poultry, but it contributes liberally from its resources, which are but slender, to the encouragement of the breeding and improvement of table poultry. According to "Whitaker's Almanack," its corporate income is only £850 and its trust income only £320.

—The Times.

Cheap Eggs.

The *Homestead* says: "We note that the price paid the farmers for eggs in these Connemara islands last July was four shillings for one hundred and twenty. When we were there, in 1899, the price paid was from eightpence a score. Now as there are six score in one hundred and twenty it will be seen that the price paid in July last was exactly the same as it was in June, 1899. The islands, at least, cannot complain of fluctuations in price. They know what they have to rely on."

REARING.

By M. A. JULL (Macdonald College, Quebec).

THE period of brooding chicks with hens or with artificial brooders depends upon the season of the year. In the early season, or if it is cold or damp during the normal brooding season, the chicks will require to be brooded for a longer time than under normal conditions, which usually lasts from six to ten weeks. After the brooding period is over—that is, when the chicks are old enough and sufficiently well developed to do without heat—the problem of rearing becomes much easier. The rearing of the chicks really includes their care and management from hatching time to maturity. There are various factors in brooding, however, which must be considered separately, and so rearing usually includes the treatment of the chicks from the time they are taken from the hens or brooders until they reach maturity.

The direct object in the treatment of the growing stock is to promote normal growth. Uniform development is necessary to ensure satisfactory results. Chicks of the same breed vary greatly in size and vitality, and it is wise to kill off all weaklings at hatching time. As the chicks develop, the weaker ones should be eliminated from the flock. A rigid system of selection should be carried out from hatching time to maturity, and all chicks lacking vigour should not be raised. A good time to weed out the weaker chicks is when they are about eight or ten weeks old. These should be placed by themselves and in some cases can be fattened profitably. With the rest of the flock the aim should be to keep them in the best possible state of health and growth.

Free Range is Best.

Little chicks must have plenty of freedom. To thrive well they must be given plenty of range on clean soil. As far as possible avoid raising the chicks on the same ground year after year, since the land on which chicks are raised continuously without cultivation soon becomes dirty and is liable to cause sickness and disease among the flocks.

Overcrowding the chicks on a small area of land will cause much trouble during the growing period. Plenty of range tends to make the chicks more vigorous and will lessen the cost of feeding. Where the chicks are allowed to run in the orchard or cultivated fields on the farm they are able to feed on many worms, insects, and other food material. They will also get plenty of green food, which is so essential in the successful raising of chicks. The cultivation of the land on which the chicks are being raised tends to keep the soil sweet and clean. Chicks on free range can obtain much mineral food, which assists greatly in their proper development.

Growing chicks require plenty of shade. The lack of shade, where chicks are raised on bare ground in small yards, is a very great disadvantage. The orchard will supply plenty of shade, or if the orchard is not available, the chicks should be raised on land where crops are grown. The cornfield makes one of the best places for the young stock.

Good Houses for Protection.

The houses in which the growing stock is kept should provide ample protection from the weather and

should be comfortable. The house should be well ventilated so that the birds are supplied with fresh air at all times. Never keep chickens in stuffy houses as they are sure to become weak and of little value.

The houses should be economical and convenient. Rough or second-hand lumber from some old building can be utilised. It is best to have a number of colony or portable houses which can be moved from place to place as the chicken range is changed from year to year. Each house should be large enough to accommodate about fifty chicks without crowding. When the colony house is very small it is hard to ventilate and there is a tendency to overcrowd the chicks. With a fair-sized house there is the advantage of being able to brood the chicks with a portable brooder in the same house in which they are afterwards raised. A house six feet wide by eight feet long will accommodate fifty chicks in comfort. A house eight feet wide by twelve feet long will accommodate about sixty to seventy-five chicks. Such houses are of convenient size for moving with a team of horses and can be well ventilated. Single boarding is sufficient. Ventilators or windows which can be opened should be placed in the ends of the house, although a draught across the floor or roosts should be avoided under all circumstances.

The houses are placed on skids or runners and should be located at frequent intervals about the range. In the early season they can be placed in the orchard and then when the grass gets dry and tough the houses can be moved to the cornfield or other places where the chicks will be able to obtain plenty of green food. If green food is not always available it should be supplied. For this purpose raise quick-growing succulent crops.

Keep the floor of the house well covered with good dry litter. While the chicks are young they should not be allowed to run in the wet grass early in the morning. It is wise to keep them from roosting too young as crooked breast bones often result. Roosts should not be placed in the colony house until the birds are about four months old.

Throughout the growing period the houses should be thoroughly disinfected every week with a ten per cent. solution of some good commercial disinfectant. Above all have the houses well ventilated, do not overcrowd the chicks and keep the houses sweet and clean always.

Feeding the Chicks.

The method of feeding chicks after being taken from the hens or brooders is much the same as during the brooding period. The chicks must be given plenty of good food consisting of a variety of grains and other materials. Where one hundred or more chickens are being raised the time and labour required for feeding can be greatly reduced by placing a quantity of feed in self-feeding hoppers. Hopper feeding gives good results where the chicks have free range over cultivated fields. At least one feed a day, however, should be fed by hand. Whole wheat and cracked corn are used chiefly, and feeding these by hand once or twice daily will give better results than by feeding them in hoppers. On the other hand, the dry mash should be fed in hoppers which are placed near

the houses. The following mash is good for growing stock :

Wheat bran	100 lbs.
Ground oats or oatmeal feed	50 "
Cornmeal	50 "
Middlings	50 "
Beef scraps	20 "
<hr/>	
	270 lbs.

The same mash can be moistened and fed once a day in troughs. The feeding of the mash moistened instead of dry will induce quicker growth. Moistened

also necessary. The time for separating varies according to the breed.

In the Leghorns and other small breeds it is advisable to separate the sexes when the chicks are seven to nine weeks old. In the Plymouth Rocks, Wyandottes, Rhode Island Reds, and other general purpose breeds separation should be done when the chicks are about four months old.

After being separated the pullets should develop to normal size so that they will be in good laying condition at the proper time in the fall and the majority of the males should be in market condition as soon as possible. A few of the males may be kept as breeders



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AN EXCELLENT ARRANGEMENT OF RUNS FOR GROWING STOCK.

mash, however, must be fed very carefully. Never feed too much.

If sour skim milk is available the quantity of beef scraps in the mash can be reduced. Sour skim milk makes an excellent drink for poultry and may be kept before them all the time. If sour milk is not available then the birds must be supplied with clean water always. The method of feeding should be such as to induce the chicks to take plenty of exercise and it should also promote good growth.

Separate Chicks According to Size and Sex.

The younger the chick the more rapidly it increases in weight, but any undesirable conditions will check growth more seriously than when the chick is older and better developed. Chicks of different ages should not be raised together. The older ones will crowd the younger ones and poorly developed chickens will result. Raise the growing stock of various ages in separate flocks as it is only in this way that the majority of good mature birds can be obtained.

The separation of the chicks according to the sex is

while the rest should be sold as broilers or roasters according to the breed and market conditions.

Hatching Eggs Afloat.

An experiment which should prove highly interesting to poultry fanciers took place on the White Star liner Baltic on her recent voyage from Liverpool to New York.

The Wells, Fargo, and Company Express have shipped by the steamer two Buff Orpington sitting hens, consigned to Judge Graves, of Jefferson City, Missouri, as an experiment.

When eggs have been sent out from this side to America, to be hatched, the lengthy sea voyage has had an adverse effect upon their fertility. The sitting hens, on arrival at New York, will be taken care of by representatives of the Wells, Fargo Company, who will place them in a special van on a train proceeding through to Jefferson City. The experiment has been undertaken in order to see whether eggs set in England can be hatched out in the United States.

—*Liverpool Post.*

SCOTTISH NOTES.

By H. LAMMIE.

THE recent hatching season in Scotland has been one of unusual interest and activity. The increased demand for pure-bred stock amongst the agricultural community has stimulated generally the poultry industry throughout the country.

Most vendors of day-old chicks have to register a prosperous year, and this despite the big run on the egg-distributing stations established by the Board of Agriculture.

Owing to the severe weather conditions the earlier hatches were not quite satisfactory, but since the middle of April good hatching results have been the rule, and though cold nights with several degrees of frost were frequent in May the young stock has not suffered severely.

Amongst fanciers there is a fair proportion of early and promising chickens, some of which are likely to make their appearance at the summer shows. The early crop of exhibition youngsters, however, cannot be accurately estimated till we see the *Highland* next month, but from reports to hand it is probable that early birds will be fewer than usual this year.

With utility poultry-keepers there has been a widespread effort this year to obtain a greater number of March and April chickens. Scotch poultry-keepers are beginning to see that early hatching is an essential condition to winter egg-production, and the coming autumn should witness an increased number of forward pullets amongst our agriculturists.

A steady and very marked improvement amongst poultry is obvious in the rural districts. This is largely due to the itinerant work carried on by the Agricultural Colleges with the assistance of the Agricultural Board.

Of course the greater proportion of farm poultry are still cross or mongrel; the housing and management are still far from satisfactory; but an increased interest in this class of farm stock is fairly general, and with the present educational agencies at work and the assistance provided for the crofter cottager and small holder in the egg-distributing stations, a rapid improvement both in the quality of the fowls and the system of management is expected.

It ought to be mentioned, however, that the commendable object of the Board in providing cheap and reliable eggs for the small man on the land requires to be carefully watched. Amongst the crofters in the Highlands and islands there may be less danger, but when the scheme of the Congested Districts Board was extended to the altered conditions and more prosperous communities of the South the difficulty of keeping the station eggs in the hands of the people for which they were intended became considerable. Wherever benefits of this kind are supplied there are those willing and ready to take an unfair advantage of them, and undoubtedly a number, perhaps not a great number, of the station eggs have reached the hands of those who can lay no claim to Government assistance.

It happens when privileges are bestowed on a certain class that abuses invariably creep in, but as the scheme progresses better organisation will reduce, if not eliminate, its undesirable features.

Another matter worthy of note connected with poultry culture, especially in the lowlands, is the high prices obtained during spring and early summer for

adult stock. Until a few years ago the old birds were collected at the farms by the higgler, for which he paid a very small price. The farmer now takes his fowls to the market, where they are sold by auction, and for several months during this season the prices have been most satisfactory, from 3s. to 5s. each being general, while good-conditioned birds of the general purpose breeds occasionally rose to 6s. each. This is a distinct gain to the farmer, and, I understand, is adding to the popularity of the heavy breeds amongst agriculturists.

Prices for eggs also have kept comparatively high and in good demand. In many parts the producer has never got less than a penny apiece. In the North, it is true, prices fall much below this figure, but as the Government scheme of small holdings proceeds and co-operation links up the present isolated units, the lonely crofter in strath and glen will obtain a price somewhat near the value of his produce.

Scotchmen have never been lacking in patriotism, and almost everything directly and distinctly associated with Scotland or her people has a club or society to perpetuate its character and spread its influence.

In poultry matters we have long been accustomed to look upon the Scotch Grey as peculiarly our own. Of recent years, however, another breed has been put forward as having a claim, if not an equal claim, to national recognition. The Scots Dumpy, as the club designates it, is a quaint little fowl of uncertain markings, with a Dorking body, a characteristic waddling gait, and said to be a good sitter and layer. Though the club is only a year or two old, the breed is not of recent origin. It has long been a favourite in some parts of the Highlands, and for many years the small farmers round the shores of Arran have bred it with success and found it a profitable bird.

Different names appear in different districts, and outside poultry-keepers when visiting these districts are at a loss to know what is meant by "Bakies," "Kitties," "Golaighs," and other appellations. At the present time the Dumpy Club is defending the designation which it believes to be the correct one, but old names, like old customs, live long in this land, and the club may experience some difficulty in changing names that have lived for generations amongst a people who by nature are opposed to changes of every description.

If, however, the breed is to increase in numbers and the club in influence, the local names should be abandoned and the club name, which is quite appropriate, become general. The "Dumpy" colour, I'm afraid, will soon be a greater difficulty than the Dumpy name. At present any colour can win. Type is of vital importance to any breed, but the Scots Dumpy Club must have a standard of markings and enforce its provisions if the breed is to become popular in its native land.

Brabanconne Club and Societe Centrale d'Aviculture de Belgique.

International Poultry Show, 7, 8, 9, November, 1914, at the "Palais du Cinquantenaire," Brussels.

Special Clubs are requested to exhibit, and special advantages will be granted.

For all information apply to the Secretaries, Mr. A. Van Daele, 21, rue de l'Arbre Bénit, Brussels; or to Mr. W. Collier, 97, rue des Cailloux, Brussels.

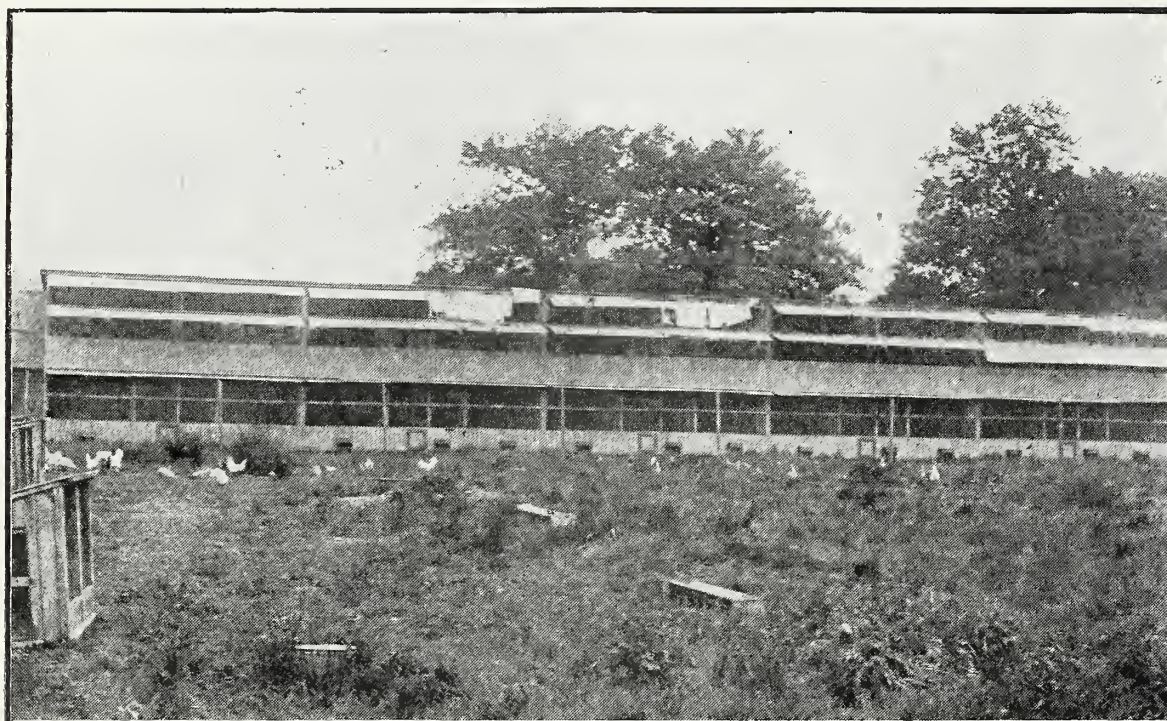
THE BUSINESS SIDE OF POULTRY-KEEPING.

By M. S. SCHOLFIELD.

THERE are poultry-keepers among all classes of society. The rich man who takes up the pursuit—and the question of cost does not enter into his calculations—gets out of it all that he desires—namely, pleasure. The fancier who gives all his time and attention to the improvement of external characters is also rewarded by watching the process of improvement that goes on by his scientific methods of breeding. The general farmer keeps poultry with more or less success. Many working men keep poultry as a recreation, and

business acumen, success is almost certain. It may be said: What about the district, nearness to market, possibilities in securing good outlet for produce, nature of soil, &c.? The already-mentioned enterprise and business acumen will find a way to overcome all such difficulties.

There are many people who have a preference for an out-door occupation, and their thoughts at once turn to poultry-keeping. There are undoubtedly many good openings in this direction, but the pursuit must be started, and conducted, on business lines. When operations are to be conducted on a large scale, unless the man is a specialist in one direction or another, it is very doubtful indeed whether he can make a livelihood out of poultry-keeping alone, but by a combina-



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A DOUBLE-DECKER INTENSIVE POULTRY HOUSE.

There is Accommodation in this House for about 2,500 Birds.

(See illustration on page 492.)

it again fulfils the purpose, as it is found a delightful and healthy hobby. There is also a large army of poultry-keepers whose aim is to make a livelihood, or, at least, augment the income which is earned from other pursuits, and it is with this class of poultry-keeper we are at present concerned.

There are many who take up the work with this object in view who do not attain the success that ought to accrue simply because they do not realise many of the essential factors that make for success. On the other hand, there are those who begin under the same conditions as the men who fail, and are themselves highly successful. Enterprise is the keynote of success. There will always be found, in every department of life, those who come to the top while others go under. In the poultry industry this is to be found on all sides, both among fanciers and utilitarians. It is very often imagined that it is only the exhibitor who has scope for enterprise. This, however, is not so, and the possibilities in this direction to the utility man are enormous. Given enterprise and

tion with another of the out-door occupations great success may be achieved. Special mention may be made of dairy-farming, fruit-growing, market gardening, and horticulture generally. While each of these has something to recommend it, there is no branch that offers such great inducements as poultry-keeping. This is a business that should appeal to those intending to engage in out-door work. Of the allied branches of agriculture already mentioned, fruit cultivation is probably more suitable for linking with poultry-keeping than any other, and it is surprising that more fruit-growers have not benefited by the combination. A further consideration in favour of poultry-keeping as a business is that the field for operation is not overstocked, despite the fact that the number of persons at present engaged in this industry is steadily increasing. Prices for eggs and table chickens are considerably higher than they ever have been before, and every indication points to a still further increase. Despite these great inducements the competition is very keen, and, consequently, business methods must

be applied, and the owner must be prepared to work hard. The work of the poultry-farmer is indeed arduous; he must be at it early and late; spring, summer, autumn, and winter all in turn bring their own particular work which must have attention. Furthermore, it is necessary to leave the beaten track and not blindly follow the road travelled by poultry-keepers of a past decade.

There is no branch of poultry-keeping that does not lend itself to specialisation. In rotation take early chickens; spring ducklings; autumn geese; and, what is of greater importance still, winter egg-production. Any of the branches here enumerated will give a return that is astounding to those who are not aware of the importance of studying the requirements of the markets. There are great openings for all those who lay themselves out to supply these products at the right time of the year. Winter egg-production applies to a greater number of poultry-keepers than any of the branches we have mentioned, since early spring chickens can only be successfully reared under certain conditions, and the raising of geese for either autumn or Christmas trade is the work of the farmer, or, perhaps, of the cottager who has the privilege of common-rights. The selling of eggs is important alike to all classes of poultry-keepers, from the farmer to the back-yarder. Whether he deals with eggs in thousands or in dozens, the same thing applies—they must be ready when prices are high, and anything that tends to this end should be considered worthy of attention. It is the business man who knows that nothing is too trifling to adopt that is likely to realise the end in view.

EGGS FROM RIGA.

THE volume of Riga's egg export in 1912 was of large dimensions, though it did not equal the figure of the previous (record) year. In general, business went briskly. In the first two months of the year, in view of the depletion of stocks, few if any transactions took place, and in March, owing to the cold, arrivals from the interior were insignificant. In April a firmer tendency set in, there was a good demand abroad, and very considerable quantities of eggs were shipped. In the next two months prices continued to rise, and eggs came in in very large quantities; shipments were enormous, but a portion of the arrivals were deposited in the cold stores, having been purchased expressly for that purpose. In July, owing to the great heat and to a customary period of stagnation, the arrivals of eggs greatly diminished, but again rose considerably in August, so that it became necessary to store a part of them in private warehouses. In the last quarter of the year the arrivals gradually diminished, and the eggs had to be withdrawn for shipment from the cold stores and private warehouses, and by the end of the year the stocks, as usual at that season, were greatly depleted.

Prices throughout almost the entire year maintained a firm and rising tendency, with only a temporary weakening in August. From that time on they rose steadily, and in the last month of the year stood at 52 to 55 r. (£5 9s. 10d. to £5 16s. 2d.) per case (of 1,440 eggs) for first quality, 39 to 43 r. (£4 2s. 4d. to £4 10s. 10d.) per case for second quality, and 37 r. (£3 18s. 2d.) per case for third quality; whereas in September the respective prices were 44, 39, and 33 r.

(£4 12s. 11d., £4 2s. 4d., and £3 9s. 8d.) per case.

According to an unofficial calculation the eggs exported were distributed as follows:

	Cases.
London	269,961
Other British ports...	305,952
Continental ports	248,771
Total	824,684

Or in all, 1,187,544,960 eggs.

The year 1913 up to date shows a great increase over these figures, and the arrivals up to July 20 are computed at 518,941 cases, roughly 25 per cent. in excess of the number exported by the same date in 1912. This increase is partly due to a better harvest and partly to a very early opening of the season. Of this amount the shipments are as follows:

	Cases.
London	148,895
Other British ports...	152,806
Continental ports	151,253
Total	452,954

The balance is accounted for by stocks in warehouse and cold storage.

In spite, however, of the large volume and brisk business done, the egg trade is stated to be passing through a critical period financially, and this crisis appears to be largely due to over-speculation. Opinions may differ as to the causes of this over-speculation, but the following explanation has been furnished to me as broadly sufficient to cover the facts:

(1) There is no system in the actual buying. Practically speaking the exporters of the country buy as much as their means will permit, and that regardless of the actual demand.

(2) The purchasing power of the exporters is largely due to the fact that they are financed by others.

(3) In the early buying period, say between May 1 and July 15, there is unhealthy competition on account of the general desire to secure supplies for cold storage and pickling, this being considered the best time, as regards actual quality and weight of eggs, to obtain such stocks. This heated competition has a tendency to force the prices up regardless of the actual state of the market at the moment.

(4) Goods having been bought at top prices, in other words too dearly, still have to be sold. Now, it is a well-known fact that, while a certain percentage of such goods will find a ready sale at more or less of a profit, there is a certain quantity which cannot be placed in the ordinary markets either on the Continent or in the United Kingdom, other than that of London. Of London it is said, "London can take any quantity at a price," and therefore these goods are dumped on to the London market, where they are sold at market price, and this is the reason that London buyers are so often able to buy actually at much less than cost price.

(5) Apart from the fact that the egg trade, as in the case of all produce, is naturally speculative, being, as it is, a season trade, or, in other words, one in which there are certain periods of large supplies or even of a glut, while at other times there are no fresh supplies owing to a cessation or falling-off in production due to either heat or cold or failure of harvests, and that merchants are therefore forced to anticipate and make

provision for the future, and that in this direction the system of cold storage has greatly tended to increase the element of speculation, there has to be considered the fact that the trade has to a great extent passed into the hands of a less substantial class of trader. In the early days of Russian egg exportation the trade was largely carried on by large and wealthy firms working on their own capital; even if exporting firms obtained financial aid, they were, nevertheless, people of reputation working a legitimate trade on conservative lines. In contrast to all this, new methods of business, and exporters of a new type, have arisen, who often have little reputation or capital to lose, and consequently have a natural tendency to gamble.—*Consular Report*.

PERPETUATING ECONOMIC QUALITIES.

IT is not to be expected—nor is it desirable—that the utility man will give the same amount of care, attention, and study to the selection of stock birds as will the fancier. It would, however, be very greatly to his own advantage were he to take a lesson from the man who breeds purely for exhibition purposes. The successful fancier has won his laurels and gained recognition by skilful breeding and knowledge of the laws appertaining thereto. These laws are equally applicable when the production of eggs and the formation of flesh are the object.

The fancier is perfectly well aware that certain characteristics are inherited by the chickens from the male bird and that other characteristics are influenced by the female, and he selects his birds accordingly. The result is that the desired end is secured, whether it be perfection of colour, type, size, or shape of comb, or other arbitrary point. The question now presents itself, Why should not the utilitarian exercise a little of the same judgment in his selection, directed, of course, into the channel for which he is specialising? There is not the slightest doubt that were he to do so results would fully justify the proceeding, since both egg-production and meat properties are inherited by the offspring in the same manner as are the points sought after by the fancier.

The first consideration in the perpetuation of economic qualities is to start operations with pure breeds. From this it must not be imagined that in every case crossing is harmful. There are times when improvement may be brought about by a first cross between suitable birds—that is, when any defined object is to be gained, such as to give size, increase fecundity, or to restore lost stamina; but when this has been achieved there the matter ends. For the perpetuation of an economic quality that is possessed by the parent purity of race is a necessity, and type of the particular breed must be rigidly adhered to. It must be remembered that there is a great difference in the individual capacity of certain hens as layers, even in breeds and strains that are famous in this direction, and it is not enough to choose a breed of this class and imagine that all the hens will uphold the reputation of the original stock. After having selected the breed, then inter-selection should take place—that is, the

individual hens of proved laying powers should be depended upon as breeders. The system of trap-nesting has accomplished much, in that individual records may be kept of the entire batch of pullets. The matter is then, of course, simplified, and all that is to be done is to breed from hens that have won their position as pullets. Trap-nesting will never, however, be generally adopted by the ordinary poultry-keeper, since it entails a tremendous amount of labour, to say nothing of the initial cost of the nests.

There are, however, other methods of determining the most prolific pullets, and by close observation these can easily be detected. They are usually very energetic, small, bright, and sharp in appearance; they never get fat, although they get their full share of food, which they convert into eggs rather than flesh. The comb is full and rosy; the plumage shows brilliancy and firmness; the head is small and neat; the eye is sharp and active-looking, and the tail of the most prolific pullets is usually carried rather high.

When birds possessing these characteristics are selected the poultry-keeper will not be far wrong in his choice. It is not, however, only necessary to breed from hens that were the most prolific as pullets and take it for granted that their progeny will possess the same laying powers. It is, of course, quite within reason to suppose that the heavy-laying capacity will be transmitted to the daughters, but there is one very potent factor that must not be overlooked, and that is the influence of the male. The strain from which he is descended ought to be regarded, otherwise he may have the effect of counteracting all the good that has been obtained by selecting the best hens. It would, of course, be an extremely difficult matter to obtain a pedigree with each purchased male bird, and the idea is not for a moment to be entertained by the ordinary poultry-keeper. At the same time, whenever possible, inquiry should be made as to the lines on which breeding is conducted by the person from whom the cockerel has been purchased. It is invariably found that a cockerel from a good laying strain has great influence in perpetuating this quality.

Not only may a heavy yield in eggs be transmitted from generation to generation, but there are other qualities which, if not equally important, are at any rate worthy of consideration. Winter laying—that is, the percentage of the year's yield that is produced during the cold months; the faculty of getting readily and quickly through the moult; good and careful mothers—if of the sitting type of fowls; freedom from disease and of sound constitution, all must be given attention. If table chickens are specialised in selection is equally necessary as when egg-production is of first importance. Size; depth and length of body; straight breast bones; rapidity of growth; whether the birds fatten readily at all points demanding attention. P.

“Instruction in agriculture in our schools may be very limited, but if nothing more be done than to start our rural pupils thinking, to give them an impetus or a turn in the right direction, to develop in them a taste for agricultural study and investigation, to arouse in them a desire to know more and to read more about agricultural affairs, and especially to increase in them a respect for their work and a pride in their calling, then the most important end of their education will have been attained.”

SOUTH AUSTRALIAN EGG-LAYING COMPETITIONS.

HELD AT THE GOVERNMENT POULTRY STATION, PARAFIELD.

THE eleventh Egg-Laying Competition for hens began on the usual date, April 1, and will continue until March 31, 1915. There are three sections. Originally four sections were arranged for, but Section 2 was merged in Section 1.

Section 1 (open to the world, ten pullets in each pen).—This section is of interest to English readers, as Mr. Tom Barron, of Catford, with great enterprise seeks to add to his laurels by entering a pen each of his White Leghorns and White Wyandottes.

There were fifty-one entries in this class.

Section 3 (light breeds) and Section 4 (heavy breeds) are devoted to the single testing of the individual birds entered by each competitor. In the former there were thirty-four and in the latter twenty-five entries, each of six pullets.

In Section 3 all the entries were White Leghorns; while in Section 4 there are Black, White and Buff Orpingtons, Silver and White Wyandottes, Barred and White Rocks, Indian Game and Rhode Island Reds.

Section 4 embraces portion of an extended scheme to thoroughly test the all-round or general purpose breeds. A full account of this will go forward by next mail; it is included in the report of last year's laying competition, and is quite novel in its conditions. The ten leading pens in the open section have scored as follows:

SCORES OF FIRST TEN PENS TO APRIL 28, 1914.

1. Tom Barron	England	White Leghorns	177
2. D. J. Robertson ...	S. Aus.	" ..	159
3. R. W. Pope	Victoria	" ..	154
4. W. Purvis	S. Aus.	" ..	152
5. H. Woodhead	" ..	" ..	149
6. Tom Barron	England	" Wyandottes	140
7. W. Purvis	S. Aus.	" Leghorns	131
8. D. Fisher	Victoria	Black Orpingtons	129
9. Bradley and McDonald ..	" ..	White Leghorns	128
10. T. A. Pettigrove ...	" ..	" ..	128

It is not usual to expect high scores during the first month, but as the test continues a steady increased flow of eggs is expected.

The English Birds.

Both pens arrived safely from England in excellent condition. One or two birds were a little out of sorts, but are now recovering. Of course, it is recognised that these birds will moult about June, but that may not seriously affect their twelve months' score. The English birds have been inspected by large numbers of breeders; over 100 assembled on one occasion.

Mr. Barron is leading with his White Leghorns (177), and is sixth with White Wyandottes (140).

Of course, there was a slight advantage, as the birds had several weeks after the voyage in which to settle down. It is a curious coincidence that as I write this report I see in the *North American* that Mr. Barron's birds are in the same position there.

Report on 1913-14 Competition.

The *Journal of Agriculture* of South Australia contains Mr. D. F. Laurie's report on the tenth com-

petition, at Parafield, for 1913-14. From this we quote the following extracts:

The General Average.

The average egg-production for the three sections, equal 900 hens, is 178.48. Last year the general average for 804 birds was 182 per hen.

The cost of feeding each hen was 5s. 3.8d. this year, as compared with 5s. 7.8d. last year—a difference of 4d. a bird.

The profit over cost of feeding per bird is 9s. 2.9d. compared with 10s. 10.2d. last year. The contributing causes are as follows:—An abnormal season, which resulted in a long period of moulting. During March the heavy moult caused a great reduction in the number of eggs laid. For the period April 1, 1913, to March 31, 1914, the average price of eggs per dozen in the Adelaide market was only 11.74d., compared with 13.08d. last year. This considerable fall in the average price of our eggs points strongly to the fact that, despite interested statements to the contrary, we must soon send part of our surplus to overseas markets, where the price is higher than in Adelaide at the glut season. Another factor to be reckoned with is that 19 pens were for a considerable period one bird short, and two pens had two birds short, and one had three birds short. The total shortage can be best expressed as 1,420 egg days—i.e., that a maximum addition of 1,420 eggs could have been made, thus largely increasing the general average. These shortages were due to deaths and incapacitated birds occurring at a period when the scores were so far behind that there was no hope of winning a prize; still, the effect on the averages is considerable.

THE CLASSIFICATION IN THE PROPOSED TEN MONTHS' LAYING COMPETITION.

To the Editor of THE ILLUSTRATED POULTRY RECORD.

Sir,—As there will doubtless be some discussion in your columns of the proposed classification in the projected ten months' laying competition at the Harper Adams Agricultural College, I should be glad to avail myself of the opportunity to draw attention to one aspect of the subject which, although perhaps the most important, is less likely than others to receive due consideration. I refer to the provision of a special section for Sussex fowls, and the almost inevitable harm that must result from such a direct encouragement to egg specialists to pervert a breed intended for the opposite purpose. I say "intended," because the history of the breed is sufficiently conclusive as regards the object of those who brought about the evolution of the Sussex, and that the purpose is opposed to that of high fecundity should be sufficiently evident to experienced breeders.

The matter has already been argued to some extent elsewhere, but I have entirely failed to find any plausible reason for the inclusion in a laying competition of fowls that are essentially producers of table chickens. We know that under good management Sussex fowls are capable of a sufficient egg production for the primary purpose of their use, and some of us are not ignorant of the result of selecting such birds for prolificness. I have seen a strain of Sussex in which this has been done for experimental purposes, and except for their distinctive colour and

markings they were not recognisable. The table type had given place to the laying type. We do not require any further proofs of the well-known and well-established fact that the opposite qualities of egg and meat production cannot exist together in their highest development in the same individual.

The one thing that matters in breeding the Sussex fowl (I am not considering show requirements as regards colour, &c.) is the preservation of its characteristic table type and quality, which must inevitably be sacrificed in proportion to its development as an egg producer beyond the normal limits that exist under ordinary good management. The Utility Poultry Club's proposal is as ill-advised as it is totally unnecessary. There are other suitable breeds awaiting development and encouragement, but even if the choice were narrowed to those that now almost entirely monopolise the pens, I should continue to protest against the inclusion of a Sussex section in a laying competition. The proposal is absurd.—Yours faithfully,

J. W. HURST.

HIGH-SPEED FARMING.

BATTLE SQUATTER'S 100 CHICKENS A MONTH.

MR. RAY, the squatter at Battle, Sussex—he is a squatter only in the Colonial sense that he built his own house, as already described, in three weeks—has developed a high-speed farm alongside his house, on a model which he believes should help to “recolonise England.”

Ground that had gone completely out of cultivation was taken. Within a month of taking it the first batch of chickens was hatched, and, after six months, as many as 100 chickens a month were sold, many of them at 3s. 6d. apiece at twelve weeks old. These poultry, as the Belgians have discovered, will restore fertility to the most barren land. On this Battle homestead the rabbits prove even more lucrative than the hens; and the demand for them has been astounding.

“Why in the name of common sense,” said the squatter, “should we import 67,000 tons of rabbits and regard poultry as a luxury? I find poultry the cheapest form of food for our family consumption; and as to rabbits, one doe has made a profit of nearly £2 in the twelve months.”

Home-Made Hoe.

A considerable part of the interest in this little squatting experiment is the use of labour-saving tools, in and outside the house. An ingenious self-made hoe will do, perhaps, four times the work of a common hoe. Tender plants are protected by tin cloches, which cost no more than a penny apiece and are light, handy, and difficult to damage. The range and the cupboards in the kitchen are labour-saving, so that the squatter's wife has leisure for tending the chickens and rabbits.

In general the squatter may be said to have proved that a man may build himself a good, habitable house within a month; and may make a five-acre farm self-supporting within six months, if the land is his own and he can build and plant fruit trees without risk of losing the fruits of his labour.—*Daily Mail*.

PRODUCTION OF EGGS & POULTRY IN SOUTH AFRICA.

THE Trades Commissioner for the Government of the Union of South Africa, writing in the Annual Report (for 1913), discusses the question of the creation of an export trade for eggs and poultry. He states that “With one or two minor exceptions, the export trades of South Africa are confined to what may be described, commercially, as ‘non-perishable’ products. This is natural for the reasons that South Africa is situated 6,000 miles from the world's great centres of population, and is itself thinly populated, with very limited markets at great distances apart; and without the aid of agricultural organisations and efficient transport facilities it is not probable that farmers will consider the production of highly perishable products on commercial lines of large dimensions.

“It has also to be remembered that, comparatively speaking, the local markets are so small that they are liable to be easily over supplied.

“During the last few years, after what at first appeared to be a series of insurmountable difficulties; a fruit export trade of considerable importance has been established. Fruit has been produced in South Africa, in one form or another, for the past century or more. What has been the result of the establishment of a successful export trade? The area of land under fruit culture has increased tenfold, and the value of such land has increased by at least 200 per cent. in most instances. Fruit growers would never have planted trees on so large a scale had they been confined to the local markets.

“With eggs and poultry an effort is being made to create another export trade in perishables; but it has to be approached from an entirely different quarter than was the case with the fresh fruit trade. The reason why eggs are not produced in large quantities in South Africa is because there is no export trade to make their production and collection in time of plenty commercially possible; and, reversing the argument, the reason why there is no export trade is because the quantities produced are so small, producers having only made provision for the requirements of the local markets. Further, the reason why eggs are not produced on a large scale is because there is no efficient system of organisation throughout the land for their proper collection and transportation; but I do not consider that the local markets could take, during the egg-laying season, the very large supplies which would result when a complete network of ‘Collecting Circles’ has been organised. This question of organised collection is really the crux of the whole position. I am glad to note that it is receiving the serious attention of Dr. Little (Government Poultry Expert), of the Poultry Associations in South Africa, and of certain other public-spirited persons. I know that at this juncture they have in view the local markets only; but their task would be greatly lightened if they could convince those whose co-operation they seek that, in addition to local markets, an export market is open to them at a time of the year when supplies are plentiful in South Africa, and that therefore there is an outlet for large quantities at fair prices. Although, in seasons of plenty, the prices obtainable may be low, the outlet is a sure one.”

POULTRY COOKERY.

ECONOMICAL SOUPS.

IN making the following soups, stock is an indispensable item, and a good supply of this will always be available when a wise, thrifty housewife is at the head of affairs. Never a bone, however small, or any odd bits of skin, gristle, &c., should be thrown away as useless until it has passed through the stock-pot. The liquid should be carefully strained every night and set in a cool place, then, when every particle of fat has been removed, it is ready for use, and most delicious soups can be prepared at very short notice. Take the following as examples:

SUMMER SOUPS.—No. 1. Take a mixture of early vegetables, such as young turnips and carrots, spring onions, cauliflower sprigs, green peas, asparagus tops, &c., &c., a bunch of herbs and a few sprigs of parsley, and, after stamping out the carrots and turnips in small fancy shapes, or simply cutting them in dice, throw the whole into boiling water and let them remain for just two or three minutes. When ready, drain the vegetables well and put them into a saucepan with as much boiling clear stock as required; boil gently until the various items are sufficiently soft, then add seasonings according to taste, and serve in a hot tureen accompanied by fried or toasted dice, neatly arranged on a hot plate covered with a dish paper or a folded napkin.

No. 2. Soak a pint of green split peas in cold water overnight, then, when required, drain them well and put them into a saucepan with some properly prepared carrots and turnips cut up in small pieces, a small quantity of celery broken into short lengths, a dozen spring onions, and a large bunch of mixed herbs. Cover the whole with good clear stock and boil gently until tender, then remove the herbs and rub everything else through a sieve. Return the pulp thus obtained to the saucepan, add more stock according to the quantity of soup required, re-boil and serve as already directed. Note: If fresh green peas are to be had, they are, of course, to be preferred, although the dried ones, if sufficiently soaked, form an excellent substitute.

A GERMAN SOUP.—Prepare and fry in the usual way two or three moderately rich pancakes, and, when they are done, drain them thoroughly on blotting paper and cut them into narrow strips about an inch long. Have ready at the same time some lean cooked ham, cut up in small strips like the pancakes, and add both to the requisite quantity of boiling stock; boil gently for two or three minutes, then pour the soup into a hot tureen in which has already been placed a mixture of carefully cooked vegetables, the greater the variety the better. Stir well, and serve very hot. If preferred, the vegetables may be omitted and the soup will still prove excellent.

AN ITALIAN SOUP.—Thoroughly cleanse four ounces of fine rice and put it into a saucepan with two ounces of fresh butter, half a pint of stock, and a seasoning of salt and pepper, and simmer steadily until tender, adding more stock if required. Prepare separately some turnips, carrots, celery, onions, &c., by cutting them into either dice or Julienne shreds and frying them lightly; then, when the rice is done sufficiently, add the vegetables and the requisite quantity of stock, and boil gently until the various items are quite soft.

Serve in a hot tureen, and add a little chopped parsley just immediately before sending to table.

CLEAR SOUP A LA FRANCAISE.—Put the required quantity of good white stock into a saucepan with a generous supply of mixed vegetables, cut up small, and simmer gently until the former is sufficiently flavoured, then strain and clear it in the usual manner and put it into a perfectly clean saucepan. Poach some fresh eggs, and when just nicely set trim them neatly round the edges and place them in a hot soup tureen; pour the boiling soup over them very slowly and carefully, so as not to break the egg yolks, stir gently, sprinkle in a small quantity of chopped parsley, and serve very hot, accompanied by toasted dice or very small daintily fried crisp croutons. Or, if preferred, boil the eggs hard and cut them either in quarters or slices; or still another way is to cut the whites in rings or Julienne shreds and use the yolks whole.

POTATO SOUP A LA CREME.—Wash and peel a dozen large sound potatoes and boil them carefully in slightly salted water. When done enough, pour off the water and allow the potatoes to dry. Peel and chop finely two medium-sized Spanish onions and put them into a saucepan with an ounce and a half of fresh butter and a sprinkling of minced parsley, and stir gently until tender; then add the potatoes, which have been rubbed through a sieve, and mix well together, after which pour in gradually as much good stock as is required. Season according to taste, stir in half-a-pint of cream, and when boiling point has been reached, serve in a hot tureen, accompanied by toast cut in dice and neatly arranged on a small dish-paper.

EGG BALLS.—These make an exceedingly dainty garnish for clear soup, and form a pleasant change from that already mentioned. To make them proceed as follows: Break one or more fresh eggs into a basin and beat in very gradually sufficient fine flour to form a paste which can be handled; season according to taste with salt, pepper, chopped parsley, grated nutmeg, and lemon rind, and work it into tiny balls about the size of ordinary marbles, or, if preferred, into miniature sausages; drop these gently into boiling clarified fat, fry until quite firm, then drain very thoroughly and add them to the soup just before serving.

Co-operation in Cape Colony.

A proposal has been made to found a Co-operative Poultry Society in Cape Colony, with a capital of £11,000, and at a meeting in Cape Town the first steps were taken.

Aftermath of Egg Train.

It is evident that the North Wales Egg and Poultry Demonstration train is bringing important results. The announcement is made that Miss Ella Edwards, formerly of Glamorgan, has been appointed Poultry Instructress in Anglesey, and that a similar appointment is to be made for Denbigh and Flint.

Further, a meeting has recently been held at Llanrwst, in the Conway Valley, under the presidency of Colonel Sandbach, at which it was decided to form a Co-operative Poultry Society for marketing.

OUR NEW ADDRESS IS IMPORTANT:

TUDOR HOUSE, TUDOR STREET,
LONDON, E.C.

FANCY MATTERS.

By "EXHIBITOR FOR TWENTY-SEVEN YEARS."

THE CRYSTAL PALACE SHOW.

In last month's ILLUSTRATED POULTRY RECORD brief reference was made to the fact that Mr. T. Threlford, one of the joint hon. secretaries, had officially informed Mr. J. C. Cayley, the secretary of the Old English Pheasant Fowl Club, that, as regards classification, last year's Crystal Palace Show had practically reached its limit. Naturally this pronouncement created something of a flutter in certain dove-cotes (or is it cockerel-boxes?), since in these days of the production of new varieties not a few read the statement with something akin to consternation. At all the important shows held last month the matter was the subject of much discussion among fanciers and exhibitors; and the view was widely expressed that, reading between the lines, Mr. Threlford's remarks mean that the Palace authorities, for some reason, do not want to entertain the suggestion of classes for Old English Pheasant Fowls. Albeit, there is certainly nothing ambiguous about what Mr. Threlford stated. How the powers that be at Sydenham will propitiate all the sponsors of new varieties now in existence and in embryo, who will shortly be clamouring for classes to be put on at the Palace for their respective "products," is a matter which it is not given to the ordinary mortal to understand. But doubtless the Council has fully considered the question, and things will work out eventually with satisfaction all round. If there is to be anything in the nature of a "scrimmage," the Palace Council has undoubtedly the right man to bring it successfully through in its other joint secretary, Mr. Pat Harrower—erstwhile Cup Final Referee!

MORE NEW BREEDS.

As the first fancier to exhibit the now popular Sicilian Buttercup in this country, Miss Blanche Stanton, of Stroud, is well known in poultry circles. She has recently, however, made another bid for fame by introducing to the British public a Soudanese fowl, which answers to the euphonic cognomen of "The Dervish." Thank goodness, it was not christened "The Fakir." That term, in polite poultriological circles would never do! From what has so far transpired regarding this latest introduction, it would appear that it is a sort of bantam from Khartoum, and was brought to the notice of Miss Stanton by her brother, who was for some time Governor of that place. It is further stated that the breed has given every satisfaction here; but for its appearance we shall have to possess our souls in patience until such time as Miss Stanton places it in a show pen.

The Black Red Warwick, recently exhibited locally by Mr. Hugh Mitchell, of Birmingham, is another recruit to our breeds of poultry; and from all accounts, a very pleasing and useful sort, and one that has every appearance of having something of a vogue in the near future. Whatever its other good points, it certainly has the merit of being of pure English "manufacture."

CATERING FOR THE AMATEUR EXHIBITOR.

The amateur exhibitor has so often complained that at the larger poultry shows, particularly those under the auspices of the important agricultural societies,

he has no chance of winning any of the money prizes; and that justifiable "grumble" has been so insistently reiterated and corroborated by one or two clubs that have interested themselves in the amateur's grievance, that at last he is to be recognised. The Prestwich Agricultural Society announces that at its show, to be held on July 11, four classes, for amateurs only, will be provided. And Mr. J. Brown, the secretary, states that if these classes get a representative entry it is his society's intention to cater extensively, if not exclusively for the amateur exhibitor. Indeed, he says, "At present it appears to me that the amateur exhibitor has little chance of success when competing against the 'cracks,' and it is with the idea of protecting the real fanciers that these classes have been provided." It is, therefore, to be hoped that amateur exhibitors will show their appreciation of such provision by liberally supporting the Prestwich fixture. Another important event at which the novice fancier is given a generous classification is the Liverpool meeting of the Royal Lancs. Agricultural Society, of which Mr. Edward Bohane is the secretary.

SOME COMING EVENTS.

There is every likelihood that, after a lapse of several years, the Glasgow Show is to be resuscitated, since a number of well-known Scottish fanciers have formed themselves into an association with this object in view. Over £70 has been guaranteed towards holding such a show, but the promoters have determined not to hold an exhibition until such fund totals £200. Any fancier desirous of guaranteeing classes or a sum towards the funds of the proposed fixture is asked to communicate with Mr. A. W. Forrester, secretary (pro. tem.), Tower View, Uddingston, near Glasgow.

Although at a meeting of subscribers it was decided to disband the Driffield Agricultural Society, it is pleasing to learn from Mr. C. R. Kirby, the secretary, that, owing to the efforts of a few old members, a new association has been formed with a membership of over 220, and that it is intended to hold a poultry show at Driffield on July 17. It is further stated that in the poultry section classification will be improved and prize-money increased.

Despite the fact that the Bristol International Exhibition did not, shortly after its opening, receive the support that was anticipated, there is every prospect of the poultry show, which is to be held in connection with it on September 30 and October 1, being a very successful event. The sectional committee is preparing the schedule, and Mr. G. T. H. Maggs (9, Trinity Street, Newtown, Bristol), the general secretary of the Fur and Feather Committee, will be glad to hear from specialist clubs and others who desire to see classes provided for their specialities. The executive committee of the Bristol Fanciers' Association, who have been entrusted with the arranging of the fixture, took the matter in hand in the belief that many will see the show who would ordinarily never visit a poultry exhibition.

So far the following well-known fanciers have accepted the Council's invitation to judge at Birmingham Poultry Show, which will be held on November

23 and 30, and December 1, 2, and 3: Messrs. A. S. Bailey, Cochins, Sussex; E. A. Cass, Buff and White Orpingtons; C. Heywood, variety bantams; E. Kendrick, ducks, geese, and turkeys; G. A. Palmer, Dorkings, Langshans, Faverolles, Houdans, table poultry, eggs; A. G. Pitts, Sumatra, Silkies, Yokohama, Campines, Andalusians, Leghorns, Minorcas, Anconas; W. A. Spencer, Wyandottes; W. Spicer, Old English Game and Old English Game bantams; T. H. Stretch, Brahmas, Indian Game, Aseel, Hamburgs, Any Other Variety; T. Taylor, Game and Game bantams; and J. Wilkinson, Black and Blue Orpingtons, Rocks, and Rhode Island Reds.

There should be an excellent collection of poultry at

and Rocks get an excellent representation. The prize-money is 20s., 10s., and 5s., for an entry fee of 3s. 6d. Mr. Herbert H. Pain (87, High Street) is the secretary and entries should be sent to him not later than July 8.

BROODY HENS IN MID-ATLANTIC.

With a view, if possible, to avoid the injury to fertile eggs that frequently accompanies a long sea journey, an experiment of the greatest interest to poultry-keepers was carried out during a recent voyage of the White Star liner *Baltic* from Liverpool to New York. From Dorset, the Wells Fargo Express Company shipped two broody Buff Orpington hens and placed them in charge of the *Baltic's* butcher. They



[Copyright.]

CHAMPION BARRED COCHIN BANTAM HEN.

the Sussex County Agricultural Show at Eastbourne, on July 15 and 16. Sussex fowls are, of course, given pride of place with no less than eighteen classes, but Orpingtons and Wyandottes are well catered for. All classes, except those for Sussex, are for birds of the year. It will be interesting to see how the chickens in the South have developed.

Another Southern show that should not be overlooked is Tunbridge Wells, on July 22 and 23. Although the classification is not so extensive as that provided for last year's event, due to the elimination of those classes that failed to fill, a generous schedule of sixty-two classes has been issued for the poultry section. Orpingtons, Wyandottes, Sussex, Leghorns,

were consigned to Judge Graves, of Jefferson City, Missouri, a well-known American poultry breeder and exhibitor; and on their arrival at New York the hens and eggs (twenty-eight of the latter) were transferred in their specially constructed coop to a special compartment on the train and taken direct to Jefferson City, some 2,000 miles from New York, in charge of the company's representative. This season in many places in this country it has been a difficult matter to obtain broody hens, and in consequence they have been almost at famine prices. The bucolic mind has apparently at last grasped the fact that a "clucker," nowadays, is worth more than two shillings, as many a fancier has learned to his cost. Once, however, let

a Transatlantic trade in "broodies" be established, and the half a crown "sitter" will speedily become but a memory!

NEW CUPS FOR THE POULTRY CLUB.

To commemorate his term of office as president, Mr. Charles Thellusson recently very generously presented the Poultry Club with ten ten-guinea challenge cups, which are to be won outright at some of the leading shows. So far, nothing has transpired as to the conditions under which these cups will be offered for competition, so presumably they will not be put up by the club until the arrival of the autumn fixtures. However, there are many members of the Poultry Club who would be thankful for a hint from the Council as to what that august body is doing in the matter.

OBITUARY.

By the death of Mr. C. A. E. Perfect, the Fancy loses one of the pioneers of the Wyandotte in this country. He was among the original members of the United Wyandotte Club, and while that body was the only society that catered for the Wyandotte in any of its varieties he took a prominent part in its affairs. He was also widely known to exhibitors as one who did much to place the poultry section of York Christmas Fat Stock Show in the splendid position it holds to-day.

The Irish poultry Fancy is the poorer by the death of Mr. R. G. Nash, J.P., of Finnstown House, Lucan, Co. Dublin. At one time he probably exhibited poultry more extensively than any fancier in Ireland; and on one occasion at Balls Bridge Show, in Dublin, his entries—for he was a breeder of many kinds of stock—were awarded sixteen championships, twenty-four first and twelve second prizes, besides many other honours.

IS A PULLET A HEN?

At the late Southport Show the fact that the special for the best hen was awarded to a pullet was the subject of much comment. That the bird in question (an Indian Game) was a pullet was not disputed. The contention was, and is, that the prize was not awarded in accordance with the rules printed in the schedule of the event, since those rules read as follows: "For best cock in the show," "for best hen in the show," "for best chicken in the four classes." The bird was given both the chicken special and the hen special; hence the trouble! What fanciers are now asking is if this ruling is to stand. Whether it was the intention of the committee of the Southport Show that the special be offered for the best male and best female is not known; but to insert these words in schedules where classes are not confined to young and old birds respectively would greatly simplify matters and obviate undesirable disputes.

The Place of the Plymouth Rock.

There are great opportunities on the farms for uniform flocks of poultry. The best for this purpose is a general, all-round variety, adapted to both eggs and meat. Where young stock has free range, as it does on the farm, it costs no more to produce an 8lb. Barred Plymouth Rock than it does a 5lb. Leghorn, while there is very little difference in the yearly egg output of these varieties.

POULTRY RAISING.

NEW SOCIETY IN CONWAY VALLEY.

HOW to develop the poultry industry carried on by the farmers and cottagers of the Vale, was the subject of a conference held recently at Llanrwst, under the auspices of the Poultry Organisation Society's North Wales Branch. Colonel S. Sandbach, the convener for Denbighshire, presided, and the meeting was addressed by Lady Boston, Professor Hopkins-Jones, the organiser of agricultural education for Denbighshire and Flintshire.

The chairman said there was room for improvement both in respect of price and in the produce sent to the market. He asked the lady poultry-keepers in the room if any of them had hens which laid over 200 eggs each in a year, or produced chickens for the table which could be sold at 4s. 6d. each. Yet birds were bred which laid like that, and others that were worth that price for table use. He did not think anybody in that Vale went in for cramming chickens, now chiefly carried on in the county of Sussex, but he hoped it would be taught shortly at the Llewenni Dairy School, now the chief school for teaching poultry methods in Denbighshire and Flintshire. There was no doubt that the Vale of Conway was a most favourable place for eggs and growing poultry. It had a mild climate and a very fine air, particularly on the higher ground, and there was plenty of the insect life which poultry required. There was also a light gravelly soil. These were all requisites for the growing of poultry and the production of eggs.

It was proposed to form a poultry society for the Vale of Conway. The society would assist the members to obtain good eggs for sitting, and young birds.

Advantage would be taken of the Utility Poultry Club, and by buying in large quantities it was hoped to help the members by supplying them at a cheaper rate than they would get if they bought individually. Equipment such as incubators, coops, and poultry houses, and supplies of suitable poultry food would also be arranged for. It was proposed to induce the tradesmen of the district to stock the best poultry foods. One of the most important things in improving the breed of poultry was to induce the farmers to adopt the system of movable poultry houses, so as to distribute the poultry over the different fields of the farm, this being one of the essentials of creating healthy poultry and breeding at a cheap rate. It was also proposed to arrange for lectures to be given in every village on the best methods of poultry raising.

Lady Boston, who spoke on behalf of the North Wales branch of the Agricultural Organisation, and also as a member of the Welsh Industries Association, gave an interesting account of the development of the poultry industry, which, with the assistance of these organisations, is taking place in Anglesey, and recommended the people of the Vale of Conway to follow the example of those who were already profiting by the movement in her own county, and so assist to secure some of the trade now in the hands of Continental rivals.

After an address by Professor Hopkins-Jones, a resolution was passed on the motion of Major Priddle, to the effect that a poultry society be formed for the Vale of Conway.—*Liverpool Courier*.

POULTRY FOR EGG PRODUCTION

IN the sixtieth annual report of the Massachusetts State Board of Agriculture is published a valuable paper by Professor James E. Rice, of Cornell University. This is worthy of careful study, as it is essentially of a practical nature, but as the report is somewhat lengthy that cannot be done. A few items, however, may fitly be quoted, and cannot fail to be of interest to readers, as, in fact, is all that comes from Professor Rice.

"The great bulk of the poultry products always have been, and probably always will be, produced on the farms and not on little bare yards of congested poultry plants. Poultry husbandry is an animal industry. It is part of a general farming system. Anyone who undertakes to establish an individual poultry-producing enterprise, strictly for poultry, and on a very limited amount of land, as people have been accustomed to think they could do, will see that he is handicapped beyond all measure as compared to the man who keeps poultry on a farm, and for the very same

have the benefit of the fields and orchards, where crops are growing, so that, instead of charging up a given amount of land to the hens, the hens will be credited for having occupied the land, because the good that they will do to the farm crops, to the orchard, to the asparagus bed, &c., is so much clear gain from the productive standpoint."

Professor Rice states what hens are good for as follows:

"First, for the meat or eggs they produce.

"Second, poultry husbandry is justified on the farm because of its soil enrichment. You can credit your hens with about one-fifth of the value of the food that you have given them in the value of the fertility they leave on the land.

"Third, hens are valuable on the farm because of their value as scavengers. Hens are justifiable in large numbers on most farms because of their value as insect hunters and as gatherers of the grain and other things to be wasted because no other class of animal on the farm will be able to utilise it.



A REARING GROUND ON A SUSSEX SMALL HOLDING.

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reason that he who keeps cows or sheep or hogs because it is live stock, and because poultry should be kept as part of a well-balanced system of rotation of other stock and other crops on a farm. He is the man who in the end will get the most money and the most satisfaction with the least risk and with the least amount of labour. That is good, sensible, business poultry farming.

"We must adopt in this country a system of poultry farming that will enable us to keep 500 or 1,000 hens on farms where farmers have been accustomed to keep only 50 to 100. We can do this and still let the hens

"The securing of good crops is frequently a question of an adequate supply of plant food. It is a question of saving this material to enable the soil to do its best work. Hens justify themselves on the land improvement basis alone."

"In respect to the 'complexion' of eggs—that is, the colour of shell—we must first find out what our customer wants, make it as good as we know how, and then demand the price for it."

"Pure breeding represents uniformity of some character or quality that it has taken many breeders fifty or seventy-five years to accomplish."

"Whenever you cast doubt upon the character of an egg it is all off with the egg."

"In many, many instances the third-year production of some hens was equal to or better than the second year, and we frequently find that where hens have struck the blue mark in the first year of high production they may strike the brown mark of low production in the second, and, after resting a while, come up in the third."

"If we had bred from those fowls that in their first year gave good production and later died, we would have been perpetuating a type of short-lived fowls."

"Trap-nesting costs more than 50 cents (2s.) a year to work the leg-banding, recording, and keeping the records and pedigrees chickens."

"Early layers are the best layers."

"A hen that is a high producer almost invariably moults late in the fall or early winter."

"Crowing is a splendid sign of vigour and masculinity, the same as cackling and singing are fine signs of femininity."

"A Leghorn is an egg-laying machine, and it can't be expected to carry a lot of surplus ballast. A Leghorn is also a flying machine, and you know how flying machines are built."

"A bird cannot eat and digest well when it is frightened or when something is going wrong. She may not have enough to eat or enough to drink, or there may be an excessively cold snap or something of that kind that strikes her, and she suffers physically, and that causes a failure of thorough development in the ova. Then, what does she do? She simply draws on that surplus food in the ova to sustain her, and she reabsorbs it—i.e., she uses up eggs that would have been laid."

"Of eggs kept thirty-five days, 46 per cent. hatched; twenty-eight days, 46 per cent.; twenty-one days, 84 per cent.; fourteen days, 90 per cent.; seven days, 92 per cent.; and one day, 93 per cent. What was the percentage of fertile eggs hatched? For those from thirty-five to one days, 1, 6, 17, 47, 45, and 68 per cent."

BREAST OF THE TURKEY.

THAT part of the turkey's flesh which is most valued is the delicate white meat which is carried on the breast, and when plucked and exposed for sale the turkey that has not a fine breast development looks miserable by the side of a bird possessed of a well-shaped and fully-meated breast. It will, accordingly, be seen that in the selection of breeding stock the points which must be sought, next to health and size, are good breast points. But comparatively few people are capable of selecting a bird having the best possible breast development, because they are not familiar with the requirements, or the points which go to make a desirable breast. In this respect many people are deceived by the apparent quantity of flesh on a plump breast, but it should be remembered that turkeys having the very plumpest of breasts are too often "duck breasted," or, in other words, the breast bone, technically known as the keel, is shallow, and quite incapable of carrying a large quantity of meat. It is also of considerable importance that the breast bone

should be straight, and very often it happens that a fine-looking turkey has its breast bone turned so much to one side that all the meat, or nearly all, is carried at one side of the keel. Such birds are known in some localities as single-breasted, and when dressed for table they look deformed and are most unsightly.

Apart from the setting of the keel, there are also deformities of the bone itself, which ought, as far as possible, to be avoided in the selection of stock turkeys. These usually take the form of a twist in the middle of the bone, which may be caused by roosting on a sharp or narrow perch at too early an age, or may be inherited from a parent defective in this respect. Another common defect is a hollow in the middle of the keel, and a third is a large bony substance, which forms like a knob on the extreme point of the keel. The breast bone should also be as long as possible, projecting well under the crop, and carried back between the legs. When the keel is long and deep the breast will also, as a natural consequence, be almost invariably broad, for there is ample room for meat-carrying, and the bird will show its breadth of breast by the large space between its legs when it stands or walks. A good breadth between the legs is, consequently, a pretty sure indication of a broad breast, carrying plenty of meat.

In selecting fowls for table, the same rules will apply, and those breeds which are possessed of long, deep, and broad breasts are the most valuable. It is always advisable to handle the breast in order to ascertain how it is formed, because the appearance of a bird as it stands is most deceptive, and a prominent crop is easily mistaken for a full breast. Fowls which are knock-kneed are usually poor in breast, and the fowls which have the most fully developed breasts are those which have legs set well apart like a well-bred Indian Game or Dorking.—*Canadian Countryman*.

THE WHITE PLYMOUTH ROCK CLUB OF AMERICA.

AT the recent annual meeting of the White Plymouth Rock Club, the following officers were elected: President, Charles H. Ward, Bethel, Conn.; Secretary-Treasurer, Martin F. Schultes, Bartlett, Tenn.; Executive Committee, Dr. L. D. LeGear, St. Louis Mo.; George H. Hilderbrand, Meadville, Pa.; and U. R. Fishel, Hope, Ind.

Much good business for the benefit of the club and breed was transacted, while progressive measures were adopted that will produce excellent results for the breeder of this popular variety.

Some of the important resolutions passed were: To request the Revision Committee of the American Poultry Association to leave the weights of Plymouth Rocks as they are.

All elections in the future to be by mail ballot.

That all advertising in future should carry the full name of the breed—White Plymouth Rocks.

That all members who join now can have their dues extended to July 1, 1915, thus participating in the benefits from both years.

Dues are only \$1.00, which includes the application fee, and should be sent to the White Plymouth Rock Club, Albashire, Bartlett, Tennessee.

FOOD PRODUCTS AT THE PANAMA PACIFIC INTERNATIONAL EXPOSITION.

WHEN a country so far away from San Francisco as Argentine appropriates \$1,300,000 in gold to expend on an exhibit of her products at the great exposition by the Golden Gate, there must be some substantial reasons for such action. And there are, but space will not permit us to mention them. More states, territories, and foreign countries already have agreed to participate than ever before took part

butter, which will then go on exhibition in the five-acre Palace of Food Products. In connection with the International Poultry Show will be an egg-laying contest. In the sheep department will be held an International sheep-shearing contest, machine shearing methods being pitted against handwork.

Over sixty acres will be devoted to the live stock show alone. In addition to displays made by breeders throughout the United States, such stock-growing countries as Canada, New Zealand, Brazil, Argentina, and South Africa will make vast displays of cattle, sheep, poultry, and other animals, Argentina alone promising an exhibit of food stuffs which her commis-



ON A SWEDISH SMALL-HOLDING.

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in a world exposition—35 foreign governments and 33 states already being officially represented, besides many which have yet to take action. The keynote of this, the first world exposition ever to be held at a seaport, is human welfare; service—industrial, educational, scientific, artistic, and economic service. Expressing this keynote will be vast congresses and conventions, national and international in character, dealing with every phase of the living thought and action of to-day.

The live stock exhibit will be held throughout the ten months of the Exposition, a quarter of a million dollars being offered in prizes. With it will be a great dairy and milk exhibit, with model dairy barns and a creamery in operation, turning out pure cheese and

sioners declare will amaze the world and outclass even the United States.

In addition to the exhibits shown in the live stock department, three great buildings—the Palaces of Agriculture, Food Products, and Horticulture—each covering over five acres, will contain the most up-to-date exhibits of the world's food products. In the two Palaces of Agriculture and Food Products the nations of the world and the various States—about eighty States and countries in all—will compete with exhibits of such necessities as refrigerated meats, poultry, game and fish; milk, butter, cheese, eggs, oils, cereals of every sort, legumes, vegetables, tubers, sugar, beverages, forage, rice, flour products of every description, wines, beverages, and confections.

AN INTERNATIONAL EGG-LAYING CONTEST.

ONE of the chief features of the great poultry show to be held in connection with the Panama-Pacific International Exposition, as planned by Chief D.O. Lively, of the Department of Live Stock, will be the International Egg-Laying Contest, which will begin on November 1, 1914, and continue for twelve full months. This contest will be conducted by the Department of Live Stock, under the supervision of the poultry division of the College of Agriculture of the University of California, thus giving it the most expert supervision as well as placing it under a recognised authority. The contesting pens will each be composed of ten females of the same variety, in which the birds must be at least eight months old and not more than eleven months old on the opening day of the contest. The competition will be open to the world, and all birds will be housed and fed alike. Diseased birds will not be received, and those which develop disease or vicious habits must be replaced with others of the same age and variety by the owner. Every care will be given the birds in the matter of feed and attention, and every precaution taken against loss by disease or otherwise, but no responsibility for losses will be assumed by either party in charge of the contest. Prizes will be awarded on performance, and the total number of marketable eggs produced by each pen will be the basis of award. The owner of the pen making the highest annual egg record will receive a trophy and \$75.00 in gold; the second prize will be a trophy and \$50.00 in gold; the third prize a trophy and \$25.00 in gold, and the fourth prize \$10.00 in gold. The leading pen in each variety will be awarded a medal and \$10.00 in gold. The owner of the hen making the highest individual record will be awarded a trophy and \$15.00 in gold; second prize \$10.00, and third prize \$5.00. The owner of each hen making a record of over 200 eggs will be awarded an Exposition trophy. Trophies will be awarded each month to the pen making the highest record for that month. Not less than three pens must be shown in order that a variety may be represented in the contest in competition for special variety prizes. In case there are less than three entries in any one variety pens may compete in other classes where eligible. All entries will be booked in the order in which they are received, and all entries will close on October 15, 1914. All pens will be numbered and the records credited to these numbers. The name and address of the owner may appear upon the pen and in the records if desired. This will be done only upon the expressed wish of the owner, as this provision is made for the protection of those owners whose birds fail to make a creditable record. All birds must have been bred by the exhibitor, who shall be the owner at the time of the contest, and who shall have owned the parent birds of the pullets entered and shown. Any exhibitor who desires may include a male bird in each pen entered in this contest, and he may have the first privilege of securing eggs for his own use from such pen. The right is reserved by the Department of Live Stock to select eggs for hatching purposes from pens which include male birds. A

uniform charge of \$1.50 per fifteen eggs will be made to cover the cost of baskets, packing, shipping, labour, &c. All eggs will be packed in baskets. All fowls to enter this competition must be shipped, express prepaid, and addressed to the Egg-laying Contest, in care of the President of the Panama-Pacific International Exposition. No fowls will be received for this contest later than October 30, 1914. All shipments of birds properly addressed must be made so as to reach the grounds of the Department of Live Stock of the Panama-Pacific International Exposition not later than October 30, though they may be received as early as October 1, 1914. An entry fee of \$25.00 will be required for each pen; cheque or money order for \$10.00 must accompany the application, and the balance of \$15.00 must be paid on or before October 15, 1914. All payments must be made to the Panama-Pacific International Exposition, and sent to D. O. Lively, Chief of the Department of Live Stock, at San Francisco, California.

GREAT POULTRY APPLIANCE WORKS

NO more striking evidence could be given of the remarkable advance made in connection with poultry breeding in this country than the vast trade done in poultry houses and appliances. One of the most notable establishments is that of Mr. Randolph Meech, at Hamworthy, near the port of Poole, in Dorsetshire, which makes the proud boast that it is the only large concern in this country engaged wholly in turning out poultry appliances. An opportunity of visiting the establishment which we had not seen since part of it was burnt out two years ago, emphasised previous observations as to the remarkable organisation and adaptation of machinery to the end in view. The standardisation of various manual processes throughout, securing expedition, simplicity of production, and economy of labour, is carried out completely from first to last. The furnaces from which the power is derived are made to consume shavings and waste pieces of wood, thus getting rid of what would otherwise be debris, and from this a large amount of tar is obtained, to be used in various ways. The endless succession of machines for various processes form an interesting study. The plant is lighted by electricity throughout, generated upon the place. The timber is brought direct by sea to Poole, and a railway siding takes direct from the works the goods to all parts of the kingdom.

Mr. Meech's indefatigable energy and enthusiasm are well known. He has had the great advantage of being a keen and ardent poultrykeeper, and his business has grown with the industry itself, to which it has in large measure contributed. The tale has been told before in *THE POULTRY RECORD*, but we may say that, commencing in a small way near Bridport, it has grown until now more than a hundred and fifty men are employed. Everything is here turned out, from dozen-day-old chick boxes to huge intensive houses three hundred feet in length. Whatever success has been achieved is well deserved. It is the owner's life as well as his work, and that means much. We have no right to record figures given to us in conversation, but the annual overturn is very large indeed.

THE SUMMER CARE OF LITTLE CHICKS.

Trouble May Be Saved by Watching Their Feed and Keeping Yards and Houses Clean

By WM. S. M. KEE.

MOST beginners in the poultry business feel that half the battle has been won when the little chicks break their shells. They are proud of their skill when they can boast of an extremely high percentage of fertility and of the strength of the young peeps. Unfortunately, this is when the beginner has his first inning of trouble; in fact, one of the most important periods in the poultry business is the first few weeks of chick babyhood. Should the chicks get a good start, they can be kept right with less annoyance, and a far better chick raised than two or three times as much labour spent later on in the chick's life. But success in the poultry business means that the poultryman must be extremely vigilant. The beginner should not become discouraged because of his troubles. Others have travelled the same road before them. The thing for him to do is to profit by the experience of others, use a little common-sense, make cleanliness a watchword, and don't overfeed. After all is said and done, experience is the best teacher.

Chicks hatched after the middle of June as a rule do not do as well as earlier-hatched chicks. July-hatched chicks usually do not get their proper growth before cold weather sets in, and the result is that they are stunted. There are lots of chicks hatched in July, however, that turn out all right, especially if the Fall and early winter are unusually warm and dry. The poultryman tries to have his hatching season over by June, as he desires to break up his breeding pens and give his male birds a rest before the moulting season. At this time he is usually devoting his energies and thought to seeing his March, April, and May chicks on a good growing foundation. A good many poultrymen in this growing period give their chicks a ration of rolled oats, ground wheat, a portion of barley, and a mixture of either beef scrap or meat meal, bran, middlings, corn meal, and cut alfalfa. This should be fed dry. In fact, some successful breeders object to giving their chicks very much green stuff for the first two to four weeks, claiming that they have less trouble with diarrhoea, after which time hulled oats, rolled oats, oat meal, corn meal, wheat middlings, or bran will help to make the chicks big-boned and strong. This should be fed dry and should be kept before the chicks at all times, along with plenty of green food. Growing chicks during June should have plenty of green foods, such as lettuce, radish, beet, or cabbage tops. Tops of green onions, chopped up, will make the little ones thrive. If these cannot be procured, lawn clippings, if cut fine, will help out to a great extent. Grain is essential.

Grain food is the best to secure big-boned, healthy chicks. These chick foods can be secured at any reputable poultry supply house. It is mixed in the proper proportions to give a balanced ration, and unless the flock is unusually large, it will pay the beginner to use some one of these feeds rather than go to the trouble and expense of making his own mixture. The dry mash should be kept in front of the chicks at all times, in hoppers, where the chicks can get it, when they want it, without fouling it, and they will not eat too much of it, either. They will take a little of it, and

wander off in search of worms, bugs, grit, and food that they may capture in the fields or in their runs. Unless their runs are large, they will soon be worn bare, and the chicks will have to be supplied with green foods that they would otherwise procure should they have unlimited freedom. There are many excellent growing feeds on the market. Any one secured from a reliable dealer will help the beginner to raise sturdy chicks. Care should be taken in the feeding. Chicks should not be fed oftener than three times a day after they are three weeks old. It is better to have them on the look-out for food than to overfeed them. Feed them in a litter where they will have to scratch for their living. We do not favour any wet mash, especially if you must feed it in this way, as such foods become dirty and sour quickly. Don't feed more at one time than the chicks will speedily clean up. All the chicks should be as near one age in each flock as possible, otherwise the older and larger chicks will eat the share of the little fellows. Overfed chicks are more susceptible to disease, and are apt to become stunted, but this does not mean that they are to be underfed. By watching your flock closely, you can tell. He is the successful man who hits the happy medium and stays there.

Watch the drinking water. When the hot weather comes, see that the young birds have plenty of fresh water before them at all times. Keep it in a shady place and protect the fountain so that the chicks cannot get into it and foul the water. Don't put water in a soiled vessel, as 75 per cent. of chick sickness comes from unclean drinking water. You will find that vessels that are not regularly cleaned will have a white scum on the sides and bottom. If this is not removed you may expect to find some ropy chicks or diarrhoea or other diseases. If the chicks are worth raising at all, they are worth the time and trouble that absolute cleanliness requires. Hot weather and uncleanliness go hand in hand and work havoc in a flock. See that the sleeping quarters are clean. If these are offensive to the smell they are not clean enough to keep the chicks in normal health. Give the little fellows a fair chance, and they will repay you for your time and trouble. If chicks are confined give them plenty of grit, ground oyster shells, and ground charcoal; they will take just what they need. You will find them all the better for these little attentions. Hot weather makes the average person sluggish, and he is apt to forget the important but little details. One must remember that disease flourishes in hot weather and that prevention is easier and better than the worry and work to cure. Little chicks are sturdy affairs after all, although their ills and ailments seem so numerous that the amateur is often frightened at the advice and warnings given. Don't try a dozen or so different methods of feeding; take one method or system and stick to it, until your own experience proves to you that you can improve on it. Feed dry foods and grain and you will keep out of a whole lot of trouble with hot weather chicks. There is only one method regarding the cleanliness of the flock. That is to keep everything clean—food, drinking water, yards, and houses.

THE UTILITY POULTRY CLUB. TWELVE MONTHS' LAYING COMPETITION 1913-14 AT SEDLESCOMBE.

MR. J. N. LEIGH, the manager of this competition, in his report for the eighth period of four weeks states that for the first time since the commencement of the competition the month's results show a falling off in the output of eggs when compared with the previous month—the figures being 4,501 eggs as against 4,807 for the previous month—a decrease of 306 eggs. The decline is entirely on the part of the heavy breeds and is attributable to excessive broodiness; no less than 106 birds out of a total of 152 having been affected, and also to moulting, which, although

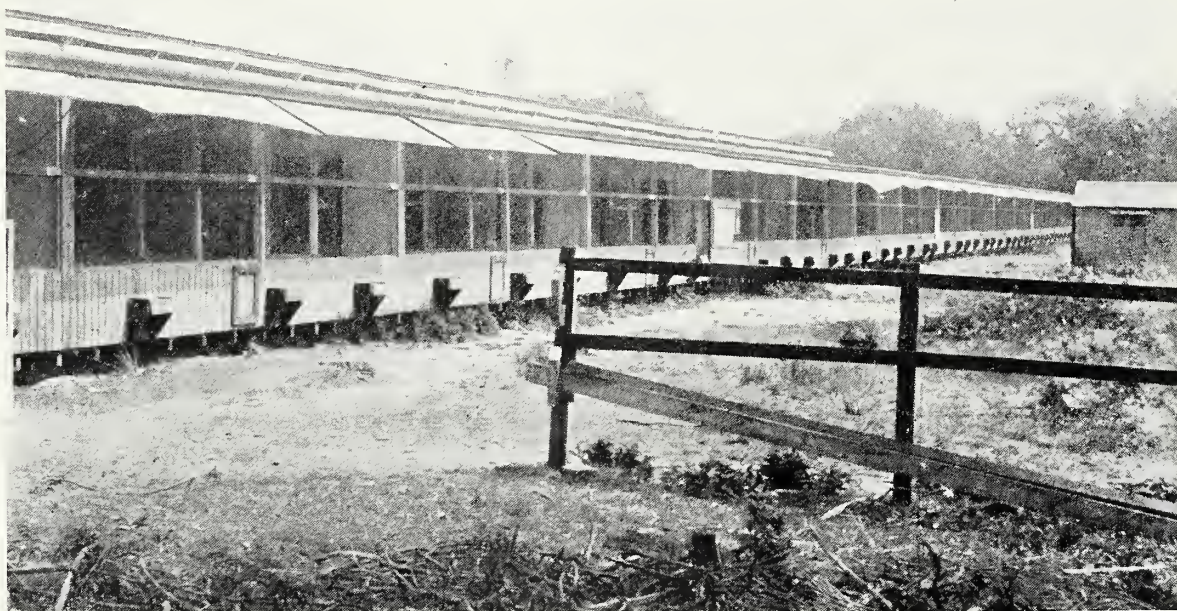
SECTION II.									
1	21	White Wyandottes	82	6	1 $\frac{3}{4}$	587	3	4	11 $\frac{3}{4}$
2	8	„ Leghorns ...	89	6	8 $\frac{1}{2}$	555	3	0	1 $\frac{1}{4}$
3	11	„ „ ...	93	6	11 $\frac{1}{2}$	567	2	18	8 $\frac{1}{4}$
4	15	„ Wyandottes	55	4	0 $\frac{3}{4}$	514	2	16	11 $\frac{1}{4}$

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TWELVE MONTHS' POULTRY LAYING COMPETITION.

THIS test, which is being carried out at the Harper Adams Agricultural College, Newport, Salop, reached the end of the eighth period of four weeks on June 5.

The test comprises fifty pens of six birds each, and



ONE OF THE LARGE INTENSIVE HOUSES ON MR. MEECH'S POULTRY FARM AT HAMWORTHY, POOLE.

There is Accommodation in this House for about 1,000 Laying Hens.

very early in the season, has become somewhat prevalent. The moulting is more noticeable in Section II.

The competition, which commenced on October 11, 1913, is divided into two sections, Section I. consisting of thirty-two pens of four birds each housed in small houses with grass runs; Section II. consisting of the same number of pens and birds. Each competitor owns a pen of the same breed in each section.

The month's results show that the leading pen in each section has maintained its position—namely, in Section I., pen No. 7, White Leghorns, with a score of 592 eggs, value £3 8s. 6d., for the thirty-two weeks; and in Section II., pen No. 21, White Wyandottes, with a score of 587 eggs, value £3 4s. 11 $\frac{3}{4}$ d., for the same period. There have been many changes amongst the other pens, White Leghorns generally taking higher places.

The scores of the leading pens are as follows:

SECTION I.									
Position.	Pen No.	Breed.	8 months' Total Eggs.	Total Value.	Total for 32 weeks. Eggs.	Total Value.			
1	7	White Leghorns ...	80	6 0 $\frac{3}{4}$	592	3 8 6			
2	15	„ Wyandottes	80	5 11 $\frac{1}{4}$	602	3 6 2 $\frac{1}{4}$			
3	11	„ Leghorns ...	87	6 7 $\frac{1}{2}$	586	3 4 2			
4	29	Buff Rocks ...	66	4 10 $\frac{1}{2}$	542	3 2 9 $\frac{3}{4}$			

the breeds which up to the present have made the best records have been the White Wyandottes and White Leghorns, but if the records are studied it will be found that all birds of these breeds do not prove so prolific, thus bearing out the great importance which "strain" plays in regard to egg production. One of the objects of these tests is to encourage the production of these good laying strains, and to make known the sources from which they may be obtained.

All the eggs are graded and valued according to weight into four classes, and the prizes are awarded to those pens of birds which lay the largest money value of eggs throughout the test; thus the production of winter eggs of good marketable size is encouraged.

The 300 birds during the 28 days have averaged 16.63 eggs each, which gives a total of 4,991 eggs. Owing to the season and weather conditions 124 birds have been broody, so that this has lessened the total somewhat.

The Leghorns during the month have done exceptionally well; there are seventeen pens of them which have averaged 118.4 per pen, and 19.7 eggs per bird.

Arrangements can be made to visit the competition by application to the college.

The records for the six leading pens are as follows :

Or. No.	Pen No.	Breed.	Eggs laid in 8th month.			Totals for 8 months.	
			1st.	2nd.	Total.	Value.	Total. Value.
1 ...	18 ...	White Wyandottes...	69 ...	6 ...	75 ...	5/8 ...	914 ... £5/5/6½
2 ...	6 ...	"	101 ...	—	101 ...	7/8½ ...	885 ... 5/1/4
3 ...	46 ...	" Leghorns ...	119 ...	—	119 ...	9/0¼ ...	903 ... 5/0/5½
4 ...	2 ...	" Wyandottes...	89 ...	13 ...	102 ...	7/8 ...	900 ... 4/14/1½
5 ...	38 ...	" Leghorns ...	117 ...	—	117 ...	8/11¾ ...	873 ... 4/13/9½
6 ...	12 ...	" Wyandottes...	80 ...	3 ...	83 ...	6/3½ ...	860 ... 4/13/7¼

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POULTRY CLUB.

THE monthly meeting of the Council was held on Friday, June 12, at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C.

Mr. Charles Thellusson occupied the chair, and there

Recommended by the Hampshire Branch—

Mr. F. de Striger, St. Leonard's Poultry Farm, Ringwood.

Recommended by the Lancashire Branch—

Mr. Charles Heywood, 23, Lever Street, Manchester.

Mr. Alfred Robinson, Brock House Farm, Freshfield, Liverpool.

Recommended by the Norfolk Branch—

Mr. John Wilkerson, Hemblington, Norwich.

Recommended by the Sussex Branch—

Mr. F. J. Bishop, 4, St. Saviour's Road, St. Leonard's.

Recommended by the Yorkshire Branch—

Mr. R. A. Blakeborough, Beechgrove, Brighouse.

Mr. George Denniss, The Barn, North Weston, Portishead.

Mr. Will Hamilton, 243, Ware Road, Hertford.

Messrs. J. H. Baker and Sons, The Forge, Barnstaple.

The following were associated : Margate and District Fanciers' Society—Hon. Secretary, Mr. Ernest F. Horne, 22, Westfield Road, Margate. Mossley and District Poultry



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were also present the Rev. T. W. Sturges, Dr. S. E. Dunkin, Miss Carey, and Messrs. W. Clarke, G. Betts, A. Smith, S. C. Court, E. E. Doughty, W. J. Golding, L. C. Terrey, A. C. Powell, P. H. Bayless, W. Rice, J. S. Hicks, J. Carlton Hunting, and T. Threlford, hon. sec.

The minutes of the last meeting were read and confirmed.

The following new members were elected :

Recommended by the Cornwall Branch—

Mr. John Roskrow, Hayle.

Mr. Thomas Mills, Hayle.

Recommended by the Derbyshire Branch—

Mr. W. Holden, Shottle House, Shottle Gate, near Derby.

Recommended by the Essex Branch—

Mr. L. Pryor, Abbey Gardens, Waltham Abbey.

Mr. M. Bosche, 11, King's Head Hill, Chingford.

Mr. W. H. Partridge, Vernons, Chappel.

Recommended by the Gloucestershire Branch—

Mr. R. P. Insall, Cotham Park Villa, 47, Cotham Road, Bristol.

Association—Hon. Secretary, Mr. Andrew Collier, Staly Road, Mossley. Wayland Agricultural Society—Hon. Secretary, Mr. Sydney S. George, Watton, Norfolk. Tiptree Fanciers' Society—Hon. Secretary, Mr. John Taylor, Heath Farm, Tiptree.

The following shows announced to be held under Club Rules were granted specials : Carstang and District, Cheshire Agricultural Society, Stamford and District, Tunbridge Wells, Radstock and District, Smethwick, Lancaster Agricultural Society, and Thornbury and District.

Correspondence.—Several letters were read and left in the hands of the secretary to deal with.

Kent County Branch.—Pursuant to notice, Mr. W. Clarke moved that the resolution passed by the Council on February 13 last be rescinded. This resolution, that the convening of a certain committee was in order, was found to be contrary to a resolution in the minute book of the County Branch, and therefore passed under a misapprehension. Mr. Powell seconded the resolution, which

was carried. The hon. secretary was then instructed to write Mr. T. F. Ramsey, asking him to carry out and complete the County Committee election within one calendar month.

New Scheme.—The Hon. Secretary reported that he had circularised the whole of the members, but had been disappointed with the response. Only 207 cards had been returned. The members wished their benefits to go to some 70 affiliated societies and specialist clubs. These benefits would not be paid out until the end of the financial year. He hoped members in sending in their subscriptions would do so at once, and at the same time state which society (if any) should receive the benefit from their membership. Although he thought he had made it clear in the circular sent that this benefit was to be used as specials to be won only by those who had never won prizes at the big shows, and, therefore, in the nature of novice prizes, it really seemed from the poor response that the members had not grasped the fact that the Poultry Club were wishing to do something for those who did not participate in the cups, medals, and specials hitherto offered. He also thought that the secretaries of the specialist clubs and societies affiliated to the Poultry Club should in their own interest explain the scheme and induce their members to take an interest in it. Messrs. Stephen Hicks, W. Clarke, P. H. Bayliss, Carlton Hunting and others were of the opinion that members had not understood the purpose of the scheme, and thought that if more publicity was given to it that there would be a better response.

Wallis Memorial.—It was decided that as the late Mr. Harry Wallis was a Langshan fancier the first "Wallis Memento" (which is a piece of silver, suitably inscribed, to be won outright) should be competed for this year at the Club Show of the Langshan Society.

Poultry Club Trophies and New Members' Cup.—It was resolved that these should be competed for at Haywards Heath Show in September.

Panama Exposition.—The sub-committee reported that they had received and carefully considered the particulars sent them by the secretary of this Exposition and advised the Council to take no action.

The next meeting of the Council will be held on Friday, July 10, at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C.—T. Threlford, hon. sec., 2, St. Luke's Square, Victoria Docks, London, E.

Mr. Tamlin's Exports.

The following is a list of Mr. W. Tamlin's exports for May, 1914 (179 machines): One 200 incubator, to F. W. Tieseman, Sydney, Australia; two 200 incubators, to Emile Staessens, Ostend; two 100 incubators and two 100 foster-mothers, to L. Stevens, Pittsburg, U.S.A.; six 100, also six 60 and six 30 incubators, to G. Barelli, sole agent for Italy; four 100 incubators and two 100 foster-mothers, to W. Randall, Malta; one 60 incubator and one 60 foster-mother, to M. Westcott, Lagos, W. Africa; two 100 incubators and one 100 foster-mother, to J. Thompson, Christchurch, New Zealand; twenty 100, also ten 60 and six 30 incubators, twelve 100 foster-mothers, to Fletcher Bradley, Ottawa, sole agent for Canada; twenty-five 100 and twenty 60 incubators, to Fletcher Bradley, New Westminster, British Columbia; ten 100 and five 60 incubators, also five 100 foster-mothers, to Mons. André Masson, La Ferte-Milon, France; twelve 100, also twelve 60 and six 30 incubators, to J. F. Marshall, Johannesburg, agent for the Transvaal.

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A special will be run on July 1, 2, 3, and 4, leaving Paddington at 7.45 a.m. each morning, and on the return journey each day from June 30 to July 4 inclusive, a special dining car express will leave Shrewsbury at 5.10 p.m. for Paddington. These specials will serve Banbury, Birmingham, and Wolverhampton in both directions.

This company will also issue cheap season tickets first and third class from any Great Western station within a radius of sixty miles at charges based upon five times the single fare and an eighth, the tickets being available by all trains up to next Saturday, July 4. Minimum fare, first class, 6s. 6d.; third class, 4s.

Excursion trains will be run from Paddington and all parts of the Great Western system to Shrewsbury during the show week.

The Great Western Company will be represented at the show ground, and, in addition to the usual office, the company will have a public kiosk at which all information can be obtained regarding travelling facilities, &c.

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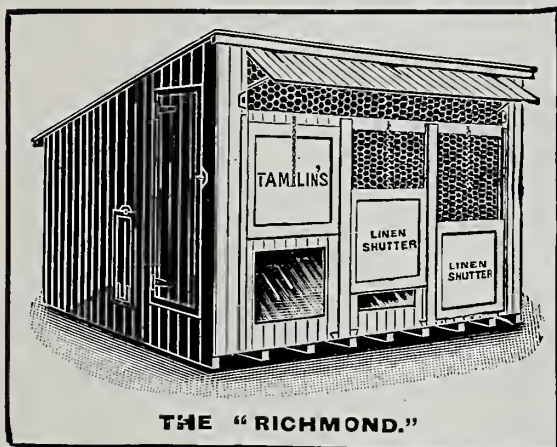
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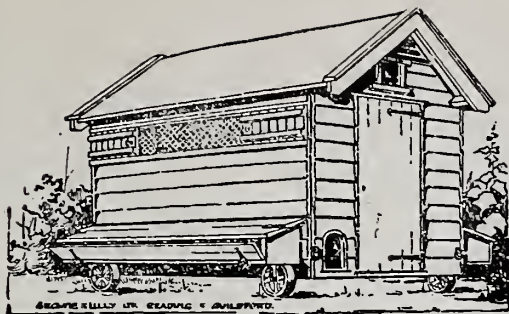
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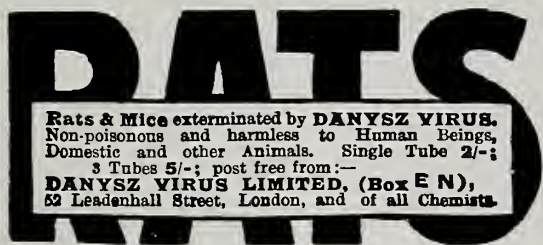
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